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BOOKS.

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(2) Classified List of State Railway Establishment and Distribution Return of Establishment of all Railways published biennially Price Rs 1 12 0 or 3s

(3) History of Indian Railways, constructed and in progress corrected up to 31st March 1939 Published sexennially. Price Rs. 4-10-0 or 7s 3d

TECHNICAL PAPERS

(5) Over 307 papers have been published by the Railway Board s office The papers comprise —

(a) Original descriptions of railway works and studies of railway problems in India and elsewhere.

(b) Reprints of articles from foreign engineering magazines

(c) Reprints or abstracts of reports received by the Government of India on subjects connected with railways

A complete list of the papers can be obtained *gratis* from the Chief Controller, Standardisation, Central Standards Office for Railways, New Delhi A few of the more important Technical papers are mentioned below —

Technical Paper. — *Name.*

No. 72 The design of well foundations for bridges
„ 143. Statistics of railway working expenditure
„ 153 River training and control on the guide bank system
„ 215 The Hardinge Bridge over the Lower Ganges at Sara
„ 219 Technical education in relation to railways in America
„ 239 The central control systems for the scheduling of operations in locomotive repairs workshops in England
„ 242. Railway Statistics and the Operating Officer
„ 243 How to judge the prospects of new railways
„ 244 Sleeper spacing and the effect of the New Permissible Axle-loads
„ 245. Report of the Indian Railway Bridge Committee on track stresses
„ 247. 1st and 2nd interim reports of the Indian Railway Bridge Committee on Impact and revision of the Bridge rules
„ 249 Operating Statistics and the Divisional Officer
„ 250 Axle-loads, wheel diameter and railheads dimensions
„ 251 A. R E and maintenance of Way Association s Impact tests on Railway Bridges (Reprinted)
Description of the Planning, Progress, Coaling and Engine Repair, Schedule System, introduced on the G. I P Railway Loco shops at Parel
No. 256 Notes on the preparation of railway projects
„ 259 The estimation of Passenger earnings on new projects
„ 261 Tube wells on the N. W Railway, 1925 27
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„ 281. The Belt System of Repairs introduced in the locomotive workshops at Kanchrapara
„ 282 Note on "Fridera"—A composition for reconditioning abrased spike holes in Railway Sleepers
„ 283 Description of a system introduced in the Stores Department of the East Indian Railway, and Appendices
„ 284 Wagon Repairs—Notes on Progressive System of Wagon Repairs as introduced in North Western Railway Workshops at Moghalpura
„ 285 Note on the Methods by which the provisions regarding Rates and Fares embodied in the English Railways Act of 1921 were framed, both from the points of view of the Railway Companies and of the compilers of the Act
„ 286 Stresses in Fishplates for 90 lbs Rails (with conclusions affecting the design of Standard Rail and Fishplate Sections)
„ 287. Report on Oil, Burners and Wicks for Signal Lamps
„ 288 G I P Railway Dynamometer Car Report No 11—Train Resistance
„ 289 The Hump Yard in India
„ 290. The Indian Railway Rates' Structure
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„ 296 Paint Flaking on Railway Carriages
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„ 298. Cost Accounting in English and Indian Railway Workshops
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„ 300 Report on Investigation into modern methods of introducing transition curves economically into existing lines of Railway
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GOVERNMENT OF INDIA

RAILWAY DEPARTMENT

(RAILWAY BOARD)

REPORT

BY THE

RAILWAY BOARD

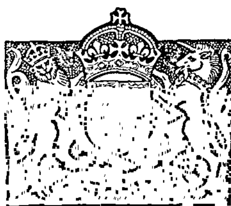
ON

INDIAN RAILWAYS

FOR

1940-41

Volume I



PUBLISHED BY MANAGER OF PUBLICATIONS, DELHI
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1942

Main statistics compared for four years.

I.—*All Indian railways* (*Classes I, II and III*).

Items		1937-38	1938-39.	1939-40	1940-41.
Gross earnings	(crores) Rs.	107 57	107 15	111 50	126 36
Total Working expenses	(crores) Rs.	69 63	71 18	72 20	73 19
Operating ratio	Per cent	64 73	66 44	64 75	57 92
Number of passenger originating	(millions)	521 28	530 62	520 67	575 72
Earnings from carriage of passengers	(crores) Rs.	31 08	30 73	30 47	34 14
Average earnings per passenger mile	Pies	3·17	3 15	3 16	3 29
Freight tons originating	(millions)	87 29	88 36	92 18	92 73
Earnings from carriage of goods	(crores) Rs.	68 66	68 57	72 56	81·48
Average earnings per freight ton mile	Pies	5 78	5 98	5 93	6 19
Total train miles	(millions)	193 20	197 04	198 84	200·90
Gross earnings per train mile	Rs.	5 57	5 40	5 64	6 33
Working expenses per train mile	Rs.	3 61†	3 58	3 65	3 66
Net earnings per train mile	Rs.	1 96†	1 82	1 99	2 67
Net earnings per mean mile worked	Rs	9,043†	8,619	9,427	12,745

† *Revised figures*

NOTE—The figures of Gross Earnings, Working Expenses and Net Earnings for 1938-39 include the Jorhat Railway and replacement and renewal expenditure on the Bengal and North Western and Rohilkund and Kumaon railways (Company's share) which items were omitted in previous years

II.—*State-owned railway systems.*

(The figures include statistics of worked lines of State-owned railways but exclude State-owned portions worked by the Jodhpur and His Exalted Highness the Nizam's State Railways)

Items		1937-38.	1938-39	1939-40	1940-41.
Gross earnings	(crores) Rs	99 83	99 07	103 02	117 23
Total Working expenses	(crores) Rs	65 30	66 38	67 22	68 13
Operating ratio	Per cent.	65 41	67 00	65 25	58 12
Number of passengers originating	(millions)	471 18	477 97	477 13	519 65
Earnings from carriage of passengers	(crores) Rs	28 27	27 89	27 65	30·99
Average earnings per passenger mile	Pies	3 13	3 11	3 12	3 25
Freight tons originating	(millions)	80·12	80 56	84 15	85 26
Earnings from carriage of goods	(crores) Rs	64 33	63 95	67·55	76 26
Average earnings per freight ton mile	Pies	5 66	5 80	5 79	6 05
Total train miles	(millions)	175 53	179 05	180 44	182 56
Gross earnings per train mile	Rs.	5 66	5 51	5 71	6 42
Working expenses per train mile	Rs	3 70	3 69	3·73	3·73
Net earnings per train mile	Rs.	1·96	1 82	1·98	2 69
Net earnings per mean mile worked	Rs	10,082	9,613	10,577	14,524

INTRODUCTORY NOTE.

1. The Railway Board's annual report on Indian Railways is prepared *for the financial year, i e., from 1st April of one year to the 31st March* of the year following.

Volume I is a narrative report dealing with the various aspects of railway working such as general administration, financial results, improvements in, and additions to, rolling stock, commercial and operating methods, recruiting, training and welfare of staff and facilities provided for the convenience of the travelling public.

Volume II contians financial and statistical summaries and statements covering the main heads of capital and revenue accounts and the complete range of railway working.

2. For the information of those who are not conversant with the value of Indian currency and the units thereof, the following details are given :—

(*a*) One *lakh* equals one hundred thousand

(*b*) One *crore* equals one hundred lakhs.

(*c*) One *anna* equals $\frac{1}{16}$th of a rupee.

(*d*) One *pie* equals $\frac{1}{12}$ th of an anna

The approximate value in English coinage of a rupee at the present rate of exchange is one shilling and six pence.

3. For statistical purposes, Indian railway systems are classified as follows :—

Class I—Railways with gross earnings of not less than Rs. 50 lakhs a year

Class II—Railways with gross earnings of less than Rs. 50 lakhs a year, but exceeding Rs 10 lakhs

Class III—Railways with gross earnings of not more than Rs 10 lakhs a year.

A detailed list of the railways in each class will be found in Statement 5, (pages 43 to 47) of Vol. II of this Report.

The following is a brief synopsis of some of the major items of interest in this report, together with a reference, in each case, to the page in the report on which the details are given:—

For full contents list see following pages.

CONTENTS.

B.—General Results of Working of all Indian Railways.

CHAPTER III.—NEW CONSTRUCTION AND ENGINEERING WORKS.

CHAPTER IV —TRANSPORTATION.

A —Operating

B —Commercial

CHAPTER V.—PUBLICITY.

CHAPTER VI.—RAILWAY COLLIERIES.

CHAPTER VII.—ROLLING STOCK AND MATERIALS.

CHAPTER VIII —STAFF.

CHAPTER IX.—AMENITIES FOR PASSENGERS.

CHAPTER X.—MISCELLANEOUS.

APPENDICES.

DIAGRAMS.

CHAPTER I.

GENERAL REVIEW.

1. Monsoon conditions and agricultural results.—In a predominantly agricultural country like India, the fortunes of railways are to a large extent dependent on agrarian prosperity which varies from year to year according to the seasonal rainfall. This report therefore, opens with a note on the incidence and effectiveness of the monsoon rainfall

The monsoon of 1940, though somewhat late, fairly established itself by the last week of June when it caused heavy floods in Orissa and widespread rain over the region from the Central Provinces to Gujarat and the Konkan. The monsoon was strong throughout July, steady during August, and generally weak in September The rainfall [illegible] practically normal except in north-west India [illegible] Averaged over the plains of India, the total [illegible] in defect of the normal by 1 per cent only Taking the year as a whole, the rainfall was within 20 per cent. of the normal, except in Berar, Mysore, *South-east Madras and the Madras Deccan* where it was *slightly in excess* and in Kashmir where it was slightly defective.

From the agricultural aspect, the season may be considered as generally favourable. The variations in the main crops are as indicated below :—

Increases—

Sugarcane 23 per cent. more than the preceding season's crop and 32 per cent. better than the average of the preceding five years

Cotton 18 per cent. increase over the preceding season

Jute 35 per cent. above the previous season's crop.

Groundnut 8 per cent }
Castor seed 4 per cent. } Better than in 1939-40
Sesamum 2 per cent. }

Wheat (1939-40 crop) 8 per cent. greater than the yield of 1938-39

Linseed (1939-40 outturn) 5 per cent more than in the preceding season.

Rape and mustard (1939-40 outturn) 21 per cent better than in the preceding season

Decrease—

Rice 15 per cent less than in 1939-40.

2. Receipts.—With the stimulus given to railway traffic by war conditions, the earnings of railways for the year 1940-41 reached a level *never attained before* The *gross traffic receipts* of State-owned railways amounted to Rs 111 94 crores, as compared with Rs. 97 65 crores in 1939-40, an increase of Rs 14 29 crores After meeting all charges including depreciation and interest on capital at charge, the year's working indicated a gain of Rs 18 46 crores. Out of this surplus, Rs 12 16 crores were placed to the credit of the general revenues of the Central Government, Rs 8 14 crores in full payment of contributions accruing in respect of 1940-41 and Rs 4 02 crores towards arrear contributions *relating to the previous years* The balance of Rs 6 30 crores was credited to the Railway reserve fund

On a comparison of the results of all Indian railways with 1939-40, the volume of traffic handled and earnings therefrom both under passenger and goods showed a substantial improvement. The figures are as follows :—

Items.		1939-40	1940-41	Percentage difference.
Number of passengers carried in (millions)		529·7	575·7	+ 8·68
Passengers miles (millions)		18,522	19,933	+ 7·62
Earnings from passengers (crores)	Rs.	30·47	34·14	+12·04
Average rate charged per passenger per mile	Pies	3·16	3·29	+ 4·11
Average miles a passenger was carried	Miles	35·0	34·6	— 1·14
Freight tons carried (millions)		92·2	92·8	+ 0·65
Net ton miles (millions)		23,493	25,289	+ 7·64
Earnings from goods carried (crores)	Rs.	72·56	81·48	+12·29
Average rate charged per ton per mile	Pies	5·93	6·19	+ 4·38
Average miles a ton of goods was carried	Miles	254·9	272·6	+ 6·94

3. Mileage.—225 miles of new railway lines were opened during the year, of which 84 miles were constructed in the province of Sind by the Government of India and the balance (141 miles) within Indian States built at the cost of the Durbars concerned. As against this, the mileage of existing lines was reduced by approximately 328 miles, the total open mileage being thus reduced to the extent of 103 miles.

4. Railways and the Legislature.—Judging from the number of questions asked in the Council of State and the Legislative Assembly, it will appear that the members of the Indian Legislature continued, as in the past, to take a keen interest in the working of the Railway Department. Out of a total number of 1,482 questions asked in both the Houses during the year 1940-41, 515 or 37 per cent. were answered by the Railway Department as compared with 488 or 39 per cent. during the previous year.

In addition to this large number of questions, an amendment of the Indian Railways Act—the Ticketless Travellers Bill—was passed, and two resolutions were discussed in the Legislative Assembly and the Council of State. These are referred to in the following paragraphs :—

4.1. Bill regarding Ticketless travelling.—Experience had shown that the provisions in the Indian Railways Act, 1890, relating to ticketless travellers were insufficiently deterrant. Consequently, a Bill further to amend the relevant sections of the Act (68, 112 and 113) was introduced in the Legislative Assembly in November 1940. The Bill was considered by the Assembly and referred to a Select Committee which met in February 1941. The Bill was then discussed and passed by the Indian Legislature and is now law.

It was considered desirable to inform the travelling public of the changes in the Act. Copies of the amended sections were, therefore, sent to railways who were asked to arrange for the earliest possible exhibition at stations of posters drawing the attention of the public to the main changes in the law and to the enhanced penalties to which passengers travelling without proper passes or tickets would be liable.

The Indian Railway Conference Association appointed a special *ad hoc* Committee to consider the preparation of model rules for adoption by railways to deal with ticketless travel and to secure uniform application of the provisions of the relevant sections of the Railways Act. Certain railways have since issued comprehensive rules for the guidance of their staff based on the recommendations of the *ad hoc* Committee. Other railways have similar rules under preparation.

4.2. Appeals of Railway employees.—On the 20th February 1941, Dr. Ziauddin Ahmad moved in the Legislative Assembly a resolution recom- ... rs of judicial mind to be attached to "the ... ind of the Railway Board to listen to the ... to scrutinise the present rule of attending to those appeals"

In support of the Resolution it was stated that there was dissatisfaction among railway staff at the manner in which their appeals were dealt with, that the rules were not adequate in securing a real right to employees; that executive officers did not pay attention to appeals and that there was very great delay in dealing with them. In opposing the Resolution it was stated on behalf of Government that the position as described appeared to be exaggerated and that the rules did provide what was in fact a real right It was admitted that improvements might be possible in the matter of delays and an undertaking was given that all the points raised in the debate would receive the careful consideration of Government.

The motion was negatived. As promised in the Assembly the handling of appeals was investigated by the Railway Board and Administrations were addressed.

4.3. Prevention of persons suffering from contagious diseases travelling in trains.—On the 27th February 1941, the Hon'ble Maulvi Ali Asghar Khan moved a resolution in the Council of State recommending that adequate steps be taken by Government to prevent persons suffering from dangerous diseases travelling by trains, etc.

In support of the Resolution, it was stated that on account of unrestricted movement of infected persons, diseases such as cholera spread very rapidly, and that if any enactment existed it should be put to effective use Failing the existence of any such enactment, it was necessary that stringent measures should be taken to cope with this evil. It was further suggested that qualified doctors should be employed at certain stations and that compartments should be set apart for the use of people suffering from infectious or contagious diseases

In reply Government explained that rules and regulations existed for the prevention of persons suffering from infectious or contagious diseases travelling in railway trains or public service vehicles These regulations provide that any persons suffering from infectious or contagious diseases are required to engage reserved compartments for themselves and their attendants. Considerable difficulty, however, existed in making full use of these rules. It was stated that only by the awakening of the public conscience and the full co-operation of the public with those responsible for running transport services could these rules be made effective A reference was made to the special steps taken by the railways, in co-operation with the public health authorities, to prevent the spread of epidemic diseases at the time of large melas. The effectiveness of these measures have already been testified to by the Public Health Committee.

The Government undertook to bring up the subject matter of the resolu- ... ntral Advisory Board of Public Health, ... ilways were represented, to see to what ... rther the existing rules and regulations ... of diseases. The resolution was not pressed and was withdrawn.

5. Railway Budget.—The railway budget for 1941-42 was discussed in detail with the Standing Finance Committee for Railways at their meetings held on the 28th and 29th January and 14th and 17th February 1941 It was presented to both Houses of the Legislature on the 19th February 1941. The general discussion on the budget took place in the Legislative

Assembly on the 22nd February, and in the Council of State on the 25th February. Voting on the demands for grants occupied two days, *viz.*, the 26th and 27th February.

During the general discussion on the budget, a large number of subjects came under review, the more important of them being the procedure for appointments and promotions in railway service, the policy relating to the depreciation fund, the question of bringing company-managed railways under State-management, contribution to general revenues, dismantlement of branch lines, amalgamation of railways, construction of locomotives in India, rates for the carriage of coal, grievances of certain classes of railway employees, etc.

Eleven motions for reductions were moved during the debates on the demands for grants. Of these, three were withdrawn after discussion, seven were negatived and one was not put to the House for want of time. The motions which occupied most of the time of the House related to the postponement of the arrangements for the manufacture of locomotives in India for the period of war, the policy regarding rates and fares, and the report of the court of enquiry appointed to investigate the question of war dearness allowance to railway employees. The first two motions were negatived and the third was withdrawn. Other motions which were negatived were in respect of the policy in regard to the purchase of stores, grievances of North Western Railway employees, selection of personnel for certain posts with special reference to the medical department, control over company-managed railways and grievances of railway workers. The other motions withdrawn related to communalism in railway services and Indianization of higher and responsible posts on railways.

6. Standing Finance Committee for Railways.—The Committee met twelve times during the year. They scrutinised the proposals for the capital and revenue expenditure to be incurred during 1940-41 and examined the demands for grants for that year, prior to their being placed before the Legislative Assembly. They also examined and approved proposals for the creation of certain superior posts on railways, including the proposal for the creation of a permanent research organization for Indian Railways. The proposals for the purchase of the Tapti Valley Railway and the grant of war dearness allowance to railway employees were also approved by the Committee.

7. Acquisition of Company Railways by State.

7.1. Purchase of the Bengal Dooars Railway.—The purchase of this railway, mention of which was made in the last year's report, was effected on the 31st December 1940, and the line amalgamated with the Eastern Bengal Railway. The great majority of the staff were also taken over by the State.

7.2. Termination of the Bombay, Baroda and Central India and Assam Bengal Railway Companies' contracts.—These railways which are State-owned are being managed by the companies under contracts with the Secretary of State, terminable on the 31st December 1941. The Government of India have decided that their management shall be transferred to the State with effect from 1st January 1942. Government shall have to pay to the Bombay, Baroda and Central India Railway Company at par its share capital of the value of £2 million (*i.e.*, Rs. $2\frac{2}{3}$ crores at 1*s*. 6*d*. per rupee) and also assume liability for debentures of the value of £1 million, carrying interest at $3\frac{1}{2}$ per cent. As regards the Assam Bengal Railway, Government will be required to pay to the Company at par its share capital amounting to £$1\frac{1}{2}$ million (*i.e.*, Rs. 2 crores at 1*s*. 6*d*. per rupee).

8. Raising of new minor works limit.—Prior to 1940-41 the limit up to which expenditure on minor improvements and additions could be charged to revenue, on State-managed railways, was Rs. 2,000. From the beginning of the year, this limit was raised to Rs. 10,000 which was deemed to be more appropriate for the railways of the size in India.

9. Meetings with Agents and General Managers of Railways and Provincial Governments.—During the year under review the Railway Board held two meetings with the General Managers of principal railways. The first meeting was held at New Delhi on the 25th October 1940 and the second on the 20th March 1941.

Several visits were paid by the Members of the Railway Board to the headquarters of the various railway administrations and provincial governments. Copies of the tour programmes were sent in advance to the Press, Provincial Governments and important mercantile associations in order that an opportunity might be afforded them to express their views on matters of common interest and discuss problems affecting the railways and transportation generally.

10. Central Advisory Council for Railways.—Three meetings of the Central Advisory Council for Railways were held at New Delhi during the year 1940-41. The first meeting was held on the 9th April 1940. A second meeting was held on the 29th November and this was adjourned to a subsequent meeting on 2nd December 1940. The following subjects were discussed at these meetings.

10.1. Nomination of Members of the Central Advisory Council for Railways to the Local Railway Advisory Committees.—Sixteen Members of the Council were nominated to serve on the various Local Railway Advisory Committees.

10.2. Dismantling of branch lines.—The Council accepted the necessity for providing rails as an urgent war measure by closing lines where this was practicable and considered that the least remunerative lines should be taken first. Some members considered that lines should not be permanently dismantled as it was not possible to see at this stage whether they should be restored after the war or not.

10.3. Termination of the contracts of the Bombay, Baroda and Central India and the Assam Bengal Railway Companies.—The Council recommended by a majority that notice should be given of termination of these contracts.

10.4. Conclusions of Government on the railway accident at Bihta.—At the request of the Chairman, Members of the Council gave their comments on the proposed draft letter to the East Indian Railway Administration, conveying the conclusions of Government on the accident.

11. Local Railway Advisory Committees.—During the year 79 meetings were held. A variety of subjects of general interest was discussed, considerable attention being paid to catering arrangements and facilities for the adequate supply of drinking water. Measures taken by railways to prevent and avoid overcrowding also received notice, as did the provision of such amenities as the cleaning of carriages *en route*, station lighting, reservation of berths, etc. Considerable interest was displayed in the improved arrangements made for the medical inspection of food-stuffs exhibited for sale. The provision of extra stations, the raising of platform levels, etc., were also discussed, but, unfortunately, many of such proposals had to be held in abeyance owing to the war conditions prevailing.

Special sub-committees on certain railways also met from time to time and examined time-table proposals, and suggested changes.

12. Railway Rates Advisory Committee.—Sir Madhavan Nair, a retired Judge of the Madras High Court, succeeded Sir Zahid Suhrawardy as President of the Committee on the 1st April 1940. Rai Bahadur (now Diwan Bahadur) P. C. Bose continued as Railway Member and Secretary.

During the year orders were passed by Government on the following three cases which had been reported on in the previous year :—

(i) A complaint from the Bengal Oil Mills Association, Calcutta, alleging that the special rates charged by the East Indian Railway for mustard oil (in bulk) from Cawnpore, Agra,

Hathras, etc., to Howrah constitute undue preference of the United Provinces oil mills, that the existing rates for mustard seed from Cawnpore and other centres in the United Provinces to Calcutta, are unreasonable and that the disturbance of the relativity between the rates for mustard seed and mustard oil has made the former particularly unreasonable.

In this case, in which the United Provinces Oil Millers' Association was permitted to appear as Intervener, the Committee came to the conclusion that the rates for mustard and rape seeds from the stations complained of to Calcutta had not been proved to be unreasonable *per se*, but that the rates for mustard oil were unduly preferential and recommended suitable rates from Aligarh, Hathras Kilah, Hathras Junction, Jumna Bridge, Belanganj, and Cawnpore.

(ii) A complaint from the Bhima Ice Factory and Flour Mills, Cuttack, alleging that the rates charged by the Bengal Nagpur Railway for wheat in full wagon loads from stations in the Central Provinces to Cuttack are not only unreasonable but also subject the applicant to undue prejudice and disadvantage *vis-a-vis* Raipur.

In this case the Committee found that the rates for wheat to Cuttack in relation to the rates for flour charged from certain stations specified in the Report were unduly preferential to the Raipur millers and unduly prejudicial to the complainants and in order that the charges of unreasonableness and undue prejudice might be removed, recommended rates for wheat in minimum consignments of 300 maunds from eight stations in the Central Provinces to Cuttack lower than those charged on actual weight.

(iii) A complaint from the Carlsbad Mineral Water Manufacturing Co., Ltd., Calcutta, alleging that the Bengal Nagpur Railway by carrying free of charge over its system, (1) aerated waters manufactured by its own factory and consigned by and intended for sale to passengers, travelling or intending to travel over its system, in its refreshment rooms, hotels and at its stations, to its servants, Clubs, Stores and Institutes and to the General public and (2) the returned empty bottles, has unduly preferred itself and subjected the applicant to undue prejudice.

In this case the Committee's finding was that the Bengal Nagpur Railway was not entitled to carry free of charge over its system (*a*) aerated waters consigned by itself or by or to its agents or contractors and intended for sale to persons other than passengers in its trains or within the precincts of its stations who were in possession of tickets and (*b*) the returned empty bottles, and that by such free carriage it has unduly preferred itself and subjected the complainants to undue prejudice. The Committee recommended that public rates should be charged thereon.

The recommendations in all the above cases were accepted by Government.

The following cases were dealt with by the Committee during the year :—

(*a*) A complaint from the Kalyanpur Lime and Cement Works, Ltd., in Bihar, alleging that the special rate of Re. 0-11-0 per ton charged by the Dehri Rohtas Light Railway on limestone from Banjari to Dehri-on-Sone booked by the Stone Suppliers, Ltd., is unduly preferential, that the "A" schedule rate of Rs. 1-11-0 per ton for limestone and lime from Banjari to Dehri-on-Sone and *via* is unreasonable, and that the sliding scale of rates for the said commodities between the same places for lime companies other than the Stone Suppliers, Ltd., are illegal and/or unreasonable.

In this case the Rohtas Industries, Ltd., and the Stone Suppliers, Ltd., were permitted to appear as Interveners. During the course of the investigation it transpired that under the sliding scale of rates not a single consignment had been booked from Banjari to Dehri-on-Sone and *via* and the Railway agreed to cancel that scale The Committee found that the "A" schedule rate of Rs. 1-11-0 per ton for lime and limestone from Banjari to Dehri-on-Sone and *via* was not unreasonable but that the special rate of Re. 0-11-0 per ton for limestone from Banjari to Dehri-on-Sone was unduly preferential to the Rohtas Industries, and had subjected the complainant to undue prejudice, and recommended the cancellation of the special rate Government accepted the recommendation

(*b*) A complaint from the Upper Doab Sugar Mills, Ltd , Shamli in the United Provinces alleging that the enhanced siding charge of Re. 0-6-8 per wagon levied by the Shahdara-Saharanpur Railway on sugarcane traffic is unreasonable.

This case was amicably settled between the parties

(*c*) A complaint from Messrs Senairam Doongarmall against the Assam Bengal Railway complaining that the terminal charge levied on outward goods traffic booked from their siding at Tinsukia in Assam and the haulage charge levied under certain circumstances are unreasonable.

This case was struck off the list, the applicant having been permitted by Government to withdraw it and submit a fresh self-contained application [*See* (*f*) below.]

(*d*) A complaint from Messrs. Byramji D. Doongaji & Sons, Seoni (Central Provinces), alleging that the conveyance rates charged by the Bengal Nagpur Railway for country spirit from Seoni to certain stations are unreasonable, that they unduly prejudice them and unduly prefer the Betul distillery and that the terminal charge levied on the traffic is unreasonable

The Committee's report on this case was under the consideration of Government at the end of the year.

(*e*) A complaint (referred to the Committee by H E the Crown Representative) from Messrs. Doalt & Sons, Jamnagar, situated in an Indian State in Kathiawar alleging that the rates for wool and cotton waste charged by the Morvi Railway from *via* Wadhwan to *via* Rajkot are unreasonable *per se*, that they unduly prefer consignments booked to the port of Navlakhi and subject to undue prejudice those who book to the Port of Bedi Bandar and that the said railway grants undue advantages to a certain customer of its in the shape of rebates, commissions, free passes, etc.

This also was amicably settled between the parties

The following cases were still under enquiry by the Committee at the close of the year:—

(*f*) A complaint from Messrs Senairam Doongarmall and 12 others alleging that the terminal charges levied by the Assam Bengal Railway and the Assam Railways and Trading Company, Ltd (Dibru-Sadiya Railway) for the Tinsukia end on traffic booked to and from the Senairam Doongarmall siding at Tinsukia are unreasonable, that the haulage charge levied by the former Railway under certain circumstances is unreasonable and that the said charges along with others subject the complainants to undue disadvantage *vis-a-vis* their trade rivals making use of the Tinsukia station proper

(g) A complaint from Messrs. Shri Venkateswar Flour Mills, Lucknow, alleging that the rates charged by the Bengal and North-Western Railway on flour from Aishbagh to certain stations on that railway are unreasonable, and that by the rates it quotes the railway gives undue preference to the Allahabad, Benares and Bahraich Mills and subjects the complainant to undue prejudice.

13. Steps taken to reduce expenses.

13.1. Transportation.—Every effort was made to reduce train mileage with the object of conserving power to meet further emergencies as they arise. Unremunerative train services were withdrawn, and it was found possible on the North Western Railway to substitute rail cars for certain trains.

Strenuous endeavour was made to keep expenses as low as possible, only works considered to be absolutely essential being sanctioned. The principal economies resulted from retrenchment of certain non-essential posts, the absorption of surplus staff, the utmost economy in the use of consumable stores and stationery, etc., and from the extension of the life of certain articles of clothing.

13.2. Engineering.—The various measures of economy introduced on railways and referred to in the previous reports, were continued, where possible, during the year under review, having due regard to safety and efficiency. A few of the important steps taken by railway administrations in this direction are mentioned below:—

On the Bengal Nagpur Railway some economy was effected by the amalgamation of permanent-way gangs and consequent reduction in the number of mates. This railway effected some saving from the welding of crossings instead of renewing them.

On the East Indian Railway also a saving of about Rs. 87,000 was achieved by the reconditioning of points and crossings and dog spikes. The importance of reconditioning has been enhanced due to the shortage of fresh material resulting from the war.

The Engineering Department of the Jodhpur Railway, keeping in view the general situation, restricted the use of metals and of imported materials during the year under review.

On the South Indian Railway the length of the charge of the maintenance gangs of certain sections of the railway was extended from 3 to 4 miles. The massed gang system of track maintenance which was introduced on the Madras Suburban area was continued. The same railway continued the mobile gang system which was introduced on certain sections.

13.3. Mechanical and Electrical.—Every endeavour was made by railways to keep their expenditure as low as possible compatible with safety and efficiency. Intensive use of locomotives and rolling stock continued to receive the special attention of all administrations in order to obtain even greater service out of available stock.

Single control examination of carriages and wagons was introduced at Mymensingh between the Assam Bengal and Eastern Bengal Railways and at Vadala between the Great Indian Peninsula Railway and Bombay Port Trust Railway; the examination originally undertaken at Amalner was re-located at Bhusaval to improve operating efficiency. All other such control junctions continued to function satisfactorily.

On the Bengal Nagpur Railway the final assessment of a large scale passenger stock re-organisation revealed that there would be an annual recurring saving of Rs. 2,51,174.

The North Western Railway sold five locomotives to the Great Indian Peninsula Railway and 200 wagons to the East Indian Railway; this administration also condemned without replacement 21 locomotives, 20 coaches and one wagon tl Rs 26 lakhs. During the ty of closing the Carriag rrangements were made t successfully concluded during the year.

With a view to reduce delays caused by the closure of wagon repair work in sick lines on Sundays the Great Indian Peninsula Railway introduced rearrangement of shifts to provide for Sunday working at their major sick line depôts. This system was also brought into effect on other railways where necessary.

As in the past, considerable economies continue to be effected by the reclamation of scrap, reconditioning of old material and the use of cheaper substitutes. The acceptance of bulk supplies from local electric supply companies enabled the Bengal Nagpur Railway to close down a gas factory at Khargpur and to provide electrical amenities at Gondia and Puri, and at the same time to effect an appreciable saving.

14. Closing of unremunerative branch lines.—Railways were called upon to supply appreciable quantities of track for military operations connected with the war. After utilising available stocks and taking into account releases of suitable rails from railways' relaying operations it was necessary to have recourse to the closing and dismantlement of open lines of railway Branches were selected which were unremunerative or insufficiently remunerative and which served areas provided with other forms of transport facilities In each case the Provincial Government or the Indian State concerned was consulted. The following lines were dismantled during 1940-41:—

1. Dalmau-Daryapur, East Indian Railway.
2. Akbarpur-Tanda, East Indian Railway
3. Chandpur Siau-Bijnor, East Indian Railway
4. Cawnpore-Khairada, Great Indian Peninsula Railway.
5. Darwha-Pusad, Great Indian Peninsula Railway
6. Coconada-Kotipalli, Madras and Southern Mahratta Railway.
7. Shoranur-Nilambur, South Indian Railway
8. Lyallpur-Jaranwalla, North Western Railway.

15. Railways and the War.—The effect of the war on railways increased rapidly during the year under review. Traffic increased both on account of military requirements and the rapidly increasing volume of supplies. Three large railway workshops were handed over complete for munitions production and, by the end of the year, the greater part of the spare capacity of other railway workshops was being utilised for the production of numeroı , and articles used in clothing, the fighting forces. Railway illed labour for war work. Increasing difficulties in getting supplies of materials from abroad involved the trial of substitutes and the reduction in supplies of materials vitally required by other Departments for war work, necessitated railways reducing their demands for commodities, such as steel, to the

minimum, which affected both repairs and replacements. Railways had to supply a considerable mileage of track for shipment overseas for Defence purposes and although the major portion came from railways' stocks and reserves, 7 branch lines, were dismantled and one branch line was in process of dismantlement at the end of the year. Railway staff, with specialized technical qualifications, were lent to the Supply Department, and Railways assisted in raising a number of Railway Military Units for service overseas. By the end of the year, over 100 officers from Class I Railways were serving in various units under the Defence Department and 25 officers had been lent to the Supply Department for war work.

CHAPTER II.

FINANCIAL RESULTS.

16. Trade Review.—Owing to the changed international conditions due to war, the total value of exports including re-exports from India during the year 1940-41 amounted to Rs. 198·7 crores against Rs 213 6 crores in the preceding year, *i.e.*, a decrease of Rs. 14 9 crores or 7 per cent. Noticeable decreases were under raw jute, raw cotton, jute bags, hides and skins, oil seeds (groundnuts), Indian raw wool and coir manufactures. Jute, cloth, tea, metals, ores and lac showed a decrease in the quantity exported but an increase in value. On the other hand, increases were registered under cotton piecegoods, cotton twist and yarn, food grains (mainly wheat and wheat flour) and tobacco.

[illegible] India (exclud- [illegible] with Rs. 165 3 [illegible] or 5 1 per cent The decreases were mainly under rice (not in the husk), machinery and mill-work, sugar, cotton piecegoods and yarn and motor vehicles (cars and cycles). The imports of mineral oils (chiefly kerosine oil), metal ores, paper and paste-board decreased in quantity but showed a slight increase in value. Increases were registered under wool, woollen goods, coal tar dyes, raw cotton, motor omnibuses, chemicals and artificial silk.

A.—*Financial results of State Railways.*

17. Financial results of working.—The improvement in railway traffic which began in the latter part of 1939-40 continued throughout the year under review and the railways earned 111·94 crores in 1940-41 against 97 65 crores in 1939-40, an increase of 14·29 crores The increase was both under goods and coaching.

17.1. Ordinary working expenses excluding depreciation amounted to 53 01 crores against 52 26 crores in the previous year or ¾ crore more

17.2. The amount set apart from revenue for depreciation was 12 64 crores, 5 lakhs more than in 1939-40. The increase was due to the capital expenditure incurred in 1939-40

17.3. The working expenses including depreciation were 65 65 crores against 64·85 crores in 1939-40 or 80 lakhs more.

17.4. Miscellaneous transactions during 1940-41 resulted in a net receipt of 85 lakhs against 64 lakhs in 1939-40 The increase of 21 lakhs was chiefly due to more receipts on account of interest on the depreciation and reserve fund balances, which exceeded the previous year's balances (32 lakhs), partly counterbalanced by more payment of surplus profits and rebate to railway companies (11 lakhs).

17.5. The net revenue was 47·14 crores against 33 44 crores in 1939-40 or 13 70 crores more.

17.6. The interest charges during 1940-41 were 28 68 crores against 29·11 crores in 1939-40, the decrease in the year under review being due to the fall in the rate of interest from 4 60 per cent. to 4·41 per cent

17.7. Against the surplus of 4 33 crores in 1939-40, the surplus during the year under review was 18 46 crores. Under the terms of the "separation convention" of 1924 (Appendix A) and the resolution passed by the Legislative Assembly in September 1939 placing a moratorium on the repayment of loans taken from the depreciation fund and of arrear contributions due to the central revenues to the end of 1938-39, 8·44 crores of this amount would [illegible] (8 14 crores on account of contribution [illegible] and 30 lakhs on account of arrears of

contribution for the year 1939-40) and the balance of 10·02 crores would have been transferred to the railway reserve. As a measure of assistance, however, to the general revenues in the conditions created by the war, it was decided to set apart for advance payment to the central revenues in 1941-42, a sum of 2·58 crores which would ordinarily have been paid to them in 1942-43; and to pay the half of the remainder of 7·44 crores to the general revenues immediately in 1940-41. In the net result the central revenues received in all 12·16 crores, and a sum of 6·30 crores (including 2·58 crores ear-marked for advance payment to central revenues in 1941-42) was transferred to the railway reserve.

17.8. The appropriation to the depreciation fund was 12·64 crores and the amount withdrawn for renewals was 7·19 crores resulting in a net addition of 5·45 crores to the fund. The actual balance at credit of the fund was 36·60 crores (including 40 lakhs on account of investments in branch line shares and loans to branch line companies) and the nominal balance was about 66·89 crores.

17.9. The total works expenditure during the year under review amounted to 9·50 crores of which 2·31 crores was charged to capital and the balance to the depreciation fund. Of the capital expenditure 16 lakhs were spent on open line works, 1 lakh on new constructions and 2,14 lakhs on purchase of railways.

17.10. At the end of 1940-41 unliquidated liabilities of railways amounted to about 62 crores against 66 crores at the end of 1939-40. Of this, 30·29 crores is the loan from the depreciation fund, and the balance represents arrears of contributions due to general revenues. The details are as follows:—

(In crores of rupees.)

Years.	Loans from depreciation fund.	Unpaid contributions to general revenues.
1931-32	4·25	5·36
1932-33	10·23	5·23
1933-34	7·96	5·21
1934-35	5·06	5·04
1935-36	4·00	4·99
1936-37	—1·21	4·91
1937-38	...	1·58
1938-39	...	3·09
1939-40	...	0·30
1940-41	...	**—4·02**
Total	30·29	31·69

18. Net traffic receipts, interest charges and surplus.—The statement below compares the surplus and the percentages of net traffic receipts and interest charges to the capital at charge for the five years ending with 1940-41.

(In lakhs of rupees.)

Year.	Net traffic receipts.	Percentage of net traffic receipts to capital at charge.	Interest charges.	Percentage of interest charges to capital at charge.	Surplus.
1936-37	31,06	4·1	29,39	3·9	1,45
1937-38	32,07	4·3	29,26	3·9	2,76
1938-39	30,44	4·0	29,30	3·9	1,37
1939-40	32,80	4·3	29,11	3·8	4,33
1940-41	**46,29**	**6·1**	**28,68**	**3·8**	**18,46**

19. Operating ratio of State-owned railways.—The operating ratio of State-owned railways, *i.e.*, the ratio of working expenses to gross traffic receipts was 47 4 per cent. (excluding depreciation) against 53 5 per cent in 1939-40 and 54 5 per cent. in 1938-39 The ratio (including depreciation) was 58 6 per cent against 66 4 per cent. in the previous year and 67 8 per cent. in 1938-39 The decrease in operating ratio is primarily due to increase in gross receipts.

20. Traffic Receipts.—During the year under review, there was an increase over last year under all the heads of traffic receipts as shown below :—

	(Crores of rupees)	
	1939-40	1940-41.
Passenger earnings	27 78	**31 12**
Other coaching earnings	5·41	**7 36**
Goods earnings	68 08	**76 77**
Sundry earnings	2 26	**2 57**
Suspense	—0 79	**—0 24**
Total	102 74	**117 58**
Less :—		
Earnings of worked lines	5 09	**5 64**
Net	97 65	**111 94**

The total increase including 55 lakhs in the earnings of worked lines was 14 84 crores, 3 34 crores under passenger traffic, 1 95 crores under other coaching traffic, 8 69 crores under goods traffic and 86 lakhs under miscellaneous traffic The net increase in the traffic receipts of State-owned lines was 14 29 crores.

20.1. The increase under passenger earnings was under all classes. Figures are not available for State-owned railways alone The figures for Class I Railways which can be taken as sufficiently representative are given below :—

	(In lakhs of rupees)	
	1939 40	1940-41
First class	68	**86**
Second class	1,32	**1,54**
Intermediate class	1,27	**1,43**
Third class	25,73	**28,66**
Total	29,00	**32,49**

20.2. Under goods earnings, all the commodities showed increase, except rice, fodder, jute, gram, pulses and other grains. The detailed figures of tonnage and earnings from the principal commodities will be found at page 23.

21. Traffic earnings of individual Railways.—The statement below compares the earnings of individual railways with those in 1939-40, under the principal heads :—

(In lakhs of rupees.)

Railways	Year.	Traffic earnings.			Sundry earnings.	Suspense.	Total.	Deduct earnings of worked lines.	Net total—State-owned railways.
		Passenger.	Other.	Goods.					
			State railways worked by State.						
Eastern Bengal	1939-40	2,14	36	3,56	31	—3	6,34	15	6,19
	1940-41	2,31	39	3,87	36	—4	6,89	16	6,73
East Indian	1939-40	5,25	78	15,11	42	—22	21,34	5	21,29
	1940-41	5,81	1,02	17,03	56	—6	24,36	..	24,36
North Western	1939-40	4,64	1,02	10,83	41	2	16,92	57	16,35
	1940-41	5,65	1,42	12,17	43	—6	19,61	59	19,02
Great Indian Peninsula	1939-40	3,40	1,20	9,35	28	—5	14,18	63	13,55
	1940-41	3,89	1,92	11,31	34	—20	17,26	70	16,56
			State railways worked by Companies.						
Assam Bengal	1939-40	76	9	1,20	8	1	2,14	14	2,00
	1940-41	81	10	1,27	5	3	2,26	15	2,11
Bengal Nagpur	1939-40	1,67	34	8,90	13	—22	10,82	2	10,80
	1940-41	1,79	47	9,69	14	6	12,15	2	12,13
Bezwada & Dhond Kurnool	1939-40	3	1	11	..	..	15	..	15
	1940-41	3	1	11	..	..	15	..	15
Bombay, Baroda & Central India.	1939-40	3,97	71	7,98	21	—14	12,73	62	12,11
	1940-41	4,41	96	9,20	24	—1	14,80	72	14,08
Jodhpur	1939-40	16	2	26	1	—5	40	4	36
	1940-41	17	2	27	..	2	48	3	45
Lucknow-Bareilly (R. & K.)	1939-40	27	3	44	3	—1	76	33	43
	1940-41	32	4	54	4	1	95	41	54
Madras & Southern Mahratta.	1939-40	2,03	45	5,32	12	—5	7,87	27	7,60
	1940-41	2,20	56	5,48	13	1	8,38	24	8,14
South Indian	1939-40	2,05	26	3,05	15	—6	5,45	25	5,20
	1940-41	2,14	29	3,57	15	—1	6,14	29	5,85
Tirhoot (B. & N. W.)	1939-40	1,41	14	1,97	11	1	3,64	2,02	1,62
	1940-41	1,59	16	2,26	13	1	4,15	2,33	1,82
Total	1939-40	27,78	5,41	68,08	2,26	—79	1,02,74	5,09	97,65
	1940-41	31,12	7,36	76,77	2,57	—24	1,17,58	5,64	1,11,94

22. Ordinary working expenses.—A comparison of working expenses of each railway with that of the previous year under the various Abstracts is given below:—

(In lakhs of rupees.)

Railways.	Maintenance of structural works.	Maintenance and Supply of loco power	Maintenance of carriage and wagon stock	Maintenance of ferry steamers and harbours.	Expenses of Traffic Department	Expenses of General Department	Miscellaneous Expenses	Electric Service Department	Surpense	Total.	Deduct Recoveries from worked lines.	Net total—State-owned Railways.
					State railways worked by State							
E. B.—												
1939-40	1,20	1,09	44	5	97	32	39	21	1	4,69	7	4,61
1940-41	71	1,19	46	6	90	33	40	21	..	4,25	7	4,18
E. I.—												
1939-40	1,42	3,40	1,21	2	2,27	76	97	58	—1	10,62	2	10,60
1940-41	1,50	3,58	1,34	2	2,23	77	93	63	—6	10,94	..	10,94
G. I. P.—												
1939-40	96	2,14	72	..	1,27	44	67	1,11	—1	7,20	22	6,64
1940-41	96	2,33	74	..	1,50	45	59	88	—1	7,44	35	7,09
N. W.—												
1939-40	1,25	3,59	1,05	..	1,56	61	70	65		9,51	31	9,20
1940-41	1,22	3,87	1,19	..	1,57	82	73	50	3	9,93	21	9,62
					State railways worked by Companies.							
A. B.—												
1939-40	27	36	11	5	20	11	10	7	—2	1,25	7	1,19
1940-41	26	35	11	4	20	11	10	7	6	1,30	7	1,23
B. N.—												
1939-40	93	1,83	89	7	1,13	44	53	26	—2	6,11	2	6,09
1940-41	89	1,93	85	7	1,12	43	55	28	2	6,14	2	6,12
Bezwada and D. K.—												
1939-40	1	2	1	.	1	1	1	.		7		7
1940-41	1	2	1		2	1	1			8	..	8
B. B. & C. I.—												
1939-40	79	2,05	72	..	1,11	48	47	55	—2	6,15	35	5,80
1940-41	74	2,18	74	.	1,11	49	54	59	2	6,41	33	6,03
Jodhpur Hyderabad—												
1939-40	4	7	2	..	4	1	4	1	1	24	2	22
1940-41	4	7	2	.	3	2	6	1	—1	22	2	20
Lucknow-Bareilly—												
1939-40	6	12	3	..	4	4	1	1		31	13	19
1940-41	6	13	3	.	7	4	2	1	—1	35	15	20
M. & S. M.—												
1939-40	52	1,61	34		63	31	35	20		3,96	16	3,80
1940-41	55	1,56	34	.	62	31	35	21	—1	3,93	13	3,80
S. I.—												
1939-40	44	1,26	17	3	47	25	29	19	—2	3,09	19	2,90
1940-41	43	1,17	17	4	53	25	29	18		3,07	20	2,87
Tirhoot (B. & N. W.)—												
1939-40	24	49	13	7	35	13	8	7	3	1,59	87	72
1940-41	26	50	13	8	35	13	9	7	—5	1,56	91	65
Miscellaneous—												
1939-40	..	..		..		.		..	1	1	.	1
1940-41	..	..	..				.		.	.	..	
Total—												
1939-40	8,13	13,08	6,84	29	10,05	4,11	4,31	2,81	—4	54,78	2,32	52,55
1940-41	7,63	18,83	6,13	30	10,25	4,16	4,44	2,85	—2	55,42	2,41	53,01

23. Losses and gains.—The statement below compares the net gain or loss on each railway with the previous year. For the purpose of calculating the gain or loss, the figures shown in the Companies' accounts have been recast to accord with the Government accounting procedure, *i.e.*, the working expenses include the appropriation to the depreciation fund and not the actual expenditure on renewals and replacements which is taken into account in the Companies' own accounts.

(In lakhs of rupees.)

—	E. B. R.	E. I. R.	G. I. P.	N. W. (Commercial.	N. W. (Strategic.)	A. B. R.	B. N. R.	B., B. & C. I. R.	M. & S. M. R.	S. I. R.	Lucknow-Bareilly.	Tirhoot.
1939-40 . .	—1,21	2,34	62	77	—1,81	—54	19	2,18	55	—20	10	31
1940-41 . .	—24	5,10	3,53	2,81	—1,52	—46	1,49	3,93	1,11	48	18	58

24. Effect of the war on earnings and expenditure.—The primary effect of the war was a large increase in military traffic and in traffic in the commodities used for war purposes. The shortage of shipping for coastal traffic diverted to rail traffic that would normally have been carried by sea. The increase in the cost of petrol and other motor accessories also resulted in the diversion of considerable traffic from road to rail. The difficulty in obtaining necessary industrial products from abroad gave a stimulus to indigenous industries and resulted in a large movement of traffic in products of Indian manufacture. On the other hand, the loss of the European continental markets for the export of certain commodities had an adverse effect on railway earnings. The net result was, however, a very substantial increase in earnings, which were about 112 crores against 97⅔ crores in 1939-40. The increase of 14⅓ crores, however, included approximately 7 crores on account of enhancement in rates and fares introduced from 1st March 1940.

As a result of the increase in traffic, there was also an increase in the working expenses of the railways. The rise in the prices of stores, employment of additional police for the protection of railway property and the adoption of measures for protection from air raids also resulted in an increase in expenditure. The increase in the cost of living necessitated the grant of a war dearness allowance to low paid staff, but as the orders which had effect from the 1st September 1940 could not be issued before the latter half of March 1941, there was very little actual expenditure on this account in the year under report. Similarly, there was less expenditure on works due to a shortage of materials.

25. Works Expenditure.—The statement below compares the total expenditure of State-owned railways on works and purchase of stores with the last four years and shows separately the expenditure on new construction, open line works and the purchase of railways.

(In lakhs of rupees.)

Years.	New constructions.	Open line works.	Purchase of railways and branch line shares.	Total Capital.	Depreciation Fund.	Total Works Expenditure.
1936-37	..	50	..	50	7,45	7,95
1937-38	—5	61	—4	52	7,99	8,51
1938-39	6	2,27	..	2,33	7,09	9,42
1939-40	30	2,86	1,32	4,48	6,53	11,01
1940-41	1	16	2,14	2,31	7,19	9,50

26. Analysis of Financial results of working.—An analysis of the financial results of the working of the railways owned by the State is given in the following statement for 1939-40 and 1940-41 :—

(Figures in thousands of rupees)

Railways	Capital at charge	Deduct amount of capital contributed by Companies and Indian States	Net Government Capital at charge	Receipts	Working Expenses including Depreciation	Payments to worked lines	Net Receipts	Percentage of Net Receipts on capital at charge	Charge against net revenue receipts		Gain	Loss.
									Payment on account of share of Surplus Profits	*Interest* charges		
				State Lines Managed by State								
N W,—												
1939-40	1,48,44,96	.	1,48,44,96	16 92 39	11,96,47	27,85	4,69 07	3 2		5,72,26		1,04,19
1940-41	1,47,91,78		1,47,91,78	19,60,73	12,40,81	28,35	6 91,08	4 7		5,61,55	1,29,51	
E B—												
1939 40	51,76,42	.	51,76 42	6,33 60	5,54,53	7,75	71,32	1 4		1,92,04		1,20,72
1940-41	53,89,62	..	53,89,62	6,88,89	5,11,12	8,01	1,69,76	3 1		1,94,20		24,44
E I—												
1939 40	1,49,58,04		1,49,58,04	21 33,33	13,00,56	3,37	8,20,40	5 5		5,86,84	2,33,56	
1940-41	1,50,52,97		1,50,52,97	24,35,52	13,43,22		10,92,30	7 3		5,82,63	5,09,62	
G I P,—												
1939 40	1,14,21 13		1,14,21,13	14 17,82	9,10,35	35 42	4 72,05	4 1		4,10,14	61,91	
1940-41	1,12,90,93		1,12,90,93	17,26,65	9,34,08	39,68	7,52,89	6 7		4,00,36	3,52,53	
				State Lines Managed by Companies, etc								
B N—												
1939-40	77,96,23	6,82,29	71,13,94	10,82,10	7,41,03	1,14	3,39,93	4 4	17	3 20,19	19,57	
1940-41	78,52,55	6,82,29	71,70,26	12,14,83	7,44,89	1,13	4,68,81	6 0	6,69	3,13,26	1,48,86	
B., B & C I—												
1939 40	74 25,33	5,49,00	68,76,33	12,72,99	7,39,15	26,86	5,06 98	6 8	(a)18,89	2,70 32	2,17,77	
1940-41	74,28,39	5,49,00	68,79,39	14,80,17	7,65,33	33,54	6,81,30	9 2	(a)21,67	2,66,37	3,93,26	
M & S M—												
1939-40	53,40,20	6,59,33	46,80,87	7 87,47	4,84,75	11,64	2,91 08	5 5	10 18	2,25 40	[illegible]	
1940-41	53,50,62	6,59,33	46,91,29	8,37,86	4,82,19	11,17	3,44,50	6 4	11,92	2,21,18	1,11,40	
S I—												
1939-40	46,24,81	5,64,76	40,60 05	5,45,26	3,85,16	6,94	1,53,16	3 3	3,19	1,70,17		20,20
1940-41	46,41,27	5,64,76	40,76,51	6,13,98	3,84,74	9,49	2,19,75	4 7	5,26	1,66,56	47,93	
Other Railways—												
1939 40	42,74,43	4,33,73	38,40,70	7,08,68	4,15,26	1,44,89	1,48,53	3 5	2,94	1,63,52	.	17,93
1940-41	42,94,74	4,33,73	38,61,01	7,99,39	4,19,70	1,77,06	2,02,63	4 7	4,10	1,61,62	36,91	
Interest on Dep and Reserve Fund Balances—												
1939-40		.		1,27,48	.		1,27,48				1,27,48	.
1940-41				1,59,56	.		1,59,56				1,59,56	.
Net Misc Receipts and Charges not attributable to any one railway—												
1939 40	.				.		.				.	(b)19,56
1940-41	..	..			.						.	(b)18 71
Total Central—												
1939 40	7,58,61,55	28,89,11	7,29,72,44	1,04,01,12	67,36,26	2,65 86	33,99,00	4 5	35,37	29,10,88	4,33,19	.
1940-41	7,60,92,87	28,89,11	7,32,03,76	1,19,17,38	68,25,88	3,08,94	47,82,56	6 3	49,64	28,67,78	18,46,43	
Provincial Railways—												
1939 40				(c)14	.	.	14			.	14	.
1940-41			.				.	.			.	.
N W. (Comm)—												
1939-40	1,14,63 25	.	1,14,63,25	15,53,04	10,07,02	27,85	5,18,17	4 5		4,41,65	76,52	.
1940-41	1,14,14,64		1,14,14,64	17,87,45	10,43,28	28,86	7,15,31	6 3		4,34,15	2,81,16	.
Non-Comm. (Strategic) N. W —												
1939 40	33,81,71		33,81,71	1,39 35	1,89,45		—50,10	—1 5	.	1,30,61		1,80,71
1940-41	33,77,14		33,77,14	1,73,28	1,97,53		—24,25	—0 7	.	1,27,40		1,51,65

	1939 40	1940-41.
(a) Includes payments to Jaipur Durbar	7,66	8,67
(b) Includes recoveries from Travancore Durbar	52	37

(c) Represents figures on account of Subsidized Companies

B.—*General results of working of all Indian Railways.*

27. Traffic and Mileage.—The more important statistical figures of traffic on all Indian Railways are summarised in the table below:—

Particulars.	Year.	Class I Railways.	Other Railways.	Total of all Railways.
(i) Total route mileage	1936-37	36,125	4,943	41,068
	1937-38	36,134	4,942	41,076
	1938-39	36,573	4,561	41,134
	1939-40	36,557	4,559	41,156
	1940-41	**36,393**	**4,659**	**41,052**
(ii) Number of passengers originating (in thousands).	1936-37	454,743	34,863	489,606
	1937-38	483,933	37,352	521,285
	1938-39	499,143	31,480	530,623
	1939-40	499,072	30,603	529,675
	1940-41	**542,351**	**33,372**	**575,723**
(iii) Number of passenger miles (in thousands).	1936-37	16,950,704	833,982	17,784,686
	1937-38	17,933,580	913,666	18,847,246
	1938-39	17,987,655	755,138	18,742,793
	1939-40	17,793,479	728,573	18,522,052
	1940-41	**19,126,357**	**806,799**	**19,933,156**
(iv) Tons originating (in thousands)	1936-37	78,444	3,962	82,406
	1937-38	83,121	4,168	87,289
	1938-39	84,367	3,994	88,361
	1939-40	88,360	3,819	92,179
	1940-41	**89,231**	**3,549**	**92,780**
(v) Number of ton-miles (in thousands).	1936-37	20,525,770	263,367	20,789,137
	1937-38	22,479,591	298,249	22,777,840
	1938-39	21,877,949	280,891	22,158,840
	1939-40	23,191,528	300,936	23,492,464
	1940-41	**24,986,806**	**301,696**	**25,288,502**

NOTE.—With the separation of Burma from the 1st April 1937 the Burma Railways are no longer under the Indian Railway Board. Therefore, in order that the results from 1937-38 may be comparable with preceding years, figures in respect of the Burma Railways have been excluded from the results for the year 1936-37. The true figures for all Indian Railways (including Burma) for the year 1936-37 may be found in the report for 1936-37.

28. Analysis of earnings.—The total earnings of all railways, including those in which the Government of India have no financial interest amounted to Rs 126 36 crores, of which Rs. 81·48 crores or 64·5 per cent. were from goods traffic, Rs 34·14 crores or 27 0 per cent. from passenger traffic and Rs. 10·74 crores or 8 5 per cent from parcels, luggage and other miscellaneous sources of revenue

28.1. Passenger earnings.—Passenger earnings increased by about 12 per cent. from Rs. 30 47 to Rs 34 14 crores. The following table shows the numbers of and earnings from passengers separately for each class, for the four years prior to the great war (1914-18) and for the last seven years. Graphs showing the number of passengers carried and the passenger miles by classes from 1923-24 are also included :—

[Excluding Burma Railways.]

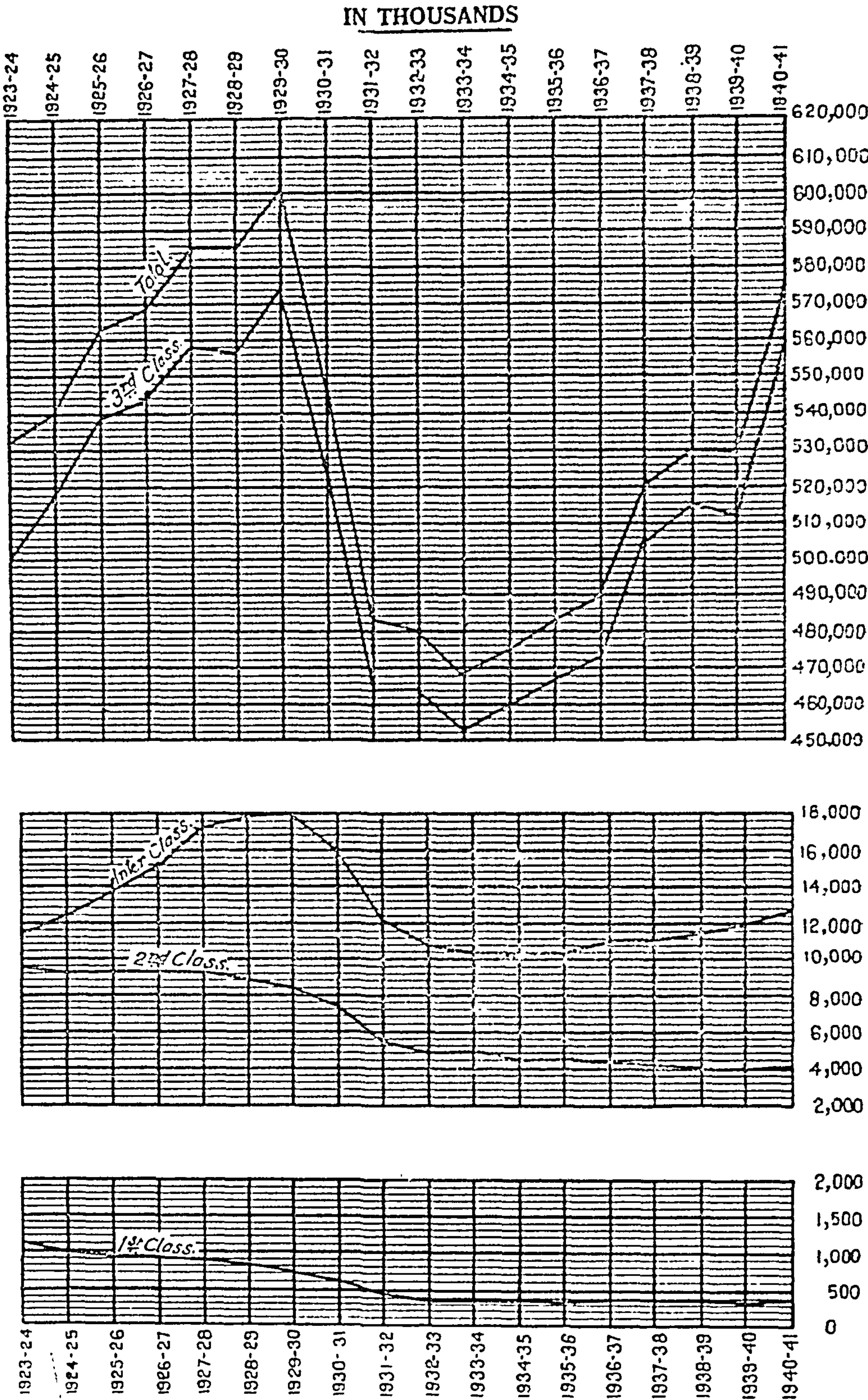
Year.	No. of passengers carried (in thousands).						Earnings from passengers (in thousands of rupees).					
	1st class	2nd class	Intermediate class.	3rd class.	Season and Vendors' tickets	Total	1st class	2nd class	Intermediate class	3rd class	Season and Vendors' tickets	Total.
1910 . .	630	2,617	10,702	294,908	23,943	332,800	55,82	74,12	94,99	13,90,22	15,58	16,30,73
1911 . .	647	2,775	11,409	308,458	25,215	348,504	63,31	80,60	1,08,88	14,92,49	16,56	17,61,84
1912 . .	640	2,840	10,508	331,820	26,320	372,128	59,83	79,84	91,37	16,13,25	17,23	18,61,52
1913-14 .	649	3,029	12,000	362,787	29,362	407,827	65,50	84,56	1,03,48	17,43,30	18,92	20,15,76
1934-35 .	361	4,563	10,316	460,595	*	475,855	74,00	1,36,88	1,11,92	26,23,75	*	29,46,55
1935-36	361	4,498	10,469	467,804	*	483,132	75,21	1,41,07	1,11,35	26,36,49	*	29,64,12
1936-37 .	389	4,329	11,085	473,803	*	489,606	78,26	1,42,09	1,14,54	26,02,32	*	29,37,21
1937-38 .	397	4,217	11,324	505,347	*	521,285	79,16	1,44,40	1,22,17	27,62,69	*	31,08,42
1938 39 .	385	4,037	11,376	514,825	*	530,623	77,09	1,39,20	1,23,01	27,34,10	*	30,73,40
1939 40 .	355	3,959	11,838	513,523	*	529,675	69,19	1,30,14	1,27,91	27,14,01	*	30,47,25
1940-41 .	381	4,152	12,701	558,489	*	575,723	86,61	1,59,02	1,44,46	30,24,02	*	34,14,11

* The number of season and vendors' tickets and their earnings included under the respective classes, the former at the rate of 50 single journeys per month.

NOTE —(i) In pre-war reports the sum of the numbers of passengers carried on each separate [illegible] Passengers travelling [illegible] thus counted as two or [illegible] s is in fact the same [illegible] " number of passengers [illegible] ;ers originating is not [illegible]

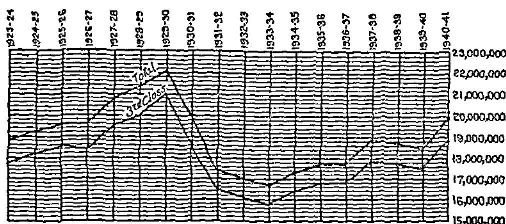
(ii) With the separation of Burma from the 1st April 1937 the Burma Railways are no longer under the Indian Railway Board Therefore, in order that the results for 1937-38 and after may be comparable with preceding years, figures in respect of the Burma Railways have been excluded from the results for 1936-37 and preceding years The true figures for all Indian Railways (including Burma) for 1936-37 and the preceding years may be found in the Report for 1936-37.

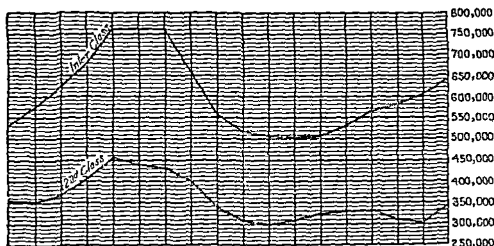
NUMBER OF PASSENGERS CARRIED ON INDIAN RAILWAYS
(EXCLUDING THE BURMA RAILWAYS).

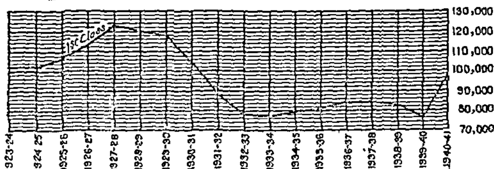


NOTE.—With effect from 1937-38 the Burma Railways are no longer under the control of the Indian Railway Board. Therefore for purposes of comparison, figures relating to the Burma Railways have been excluded from all the years.

NUMBER OF PASSENGER MILES ON INDIAN RAILWAYS
(EXCLUDING THE BURMA RAILWAYS).
IN THOUSANDS







NOTE.—With effect from 1937-38 the Burma Railways are no longer under the control of the Indian Railway Board. Therefore for purposes of comparison, figure relating to the Burma Railways have been excluded from all the years.

CHAPTER III.

NEW CONSTRUCTION AND ENGINEERING WORKS.

29. Capital Expenditure.—At the end of March 1941, the total capital at charge on all railways, including those under construction, amounted to Rs. 853·78 crores, of which Rs. 760·93 crores was capital at charge on State-owned railways inclusive of premia paid in the purchase of Companies' lines. The remainder, Rs. 92·85† crores, represented capital raised by Indian States, Companies and District Boards.

The capital at charge of State-owned railways is composed as follows:—

	£
Liability and debt incurred in purchase of railways .	150,106,630
Less liability and debt cancelled by the operation of Annuities and Sinking Funds	—29,284,941
Net amount outstanding	120,821,689*
	Rs. (omitting 000)
Direct expenditure by Government	5,99,83,91
The above sterling figure converted into rupees . .	1,61,08,96*
Grand Total .	7,60,92,87

By far the greater portion of this amount, namely Rs. 732,03,76,000 is Government capital and only 1-25th or Rs. 28,89,11,000 is owned by Companies, etc. These figures include Rs. 33,77,14,000 on account of capital expenditure to the end of March 1941, on strategic lines.

29.1. The total capital outlay on all railways during 1940-41 was Rs. 3·36 crores, of which Rs. 2·31 crores were spent on State-owned railways. The following statement shows how this outlay of Rs. 2·31 crores was distributed between open line works, rolling-stock and new line; similar figures being given for the previous four years and for 1913-14.

Year.	Open Lines.			New lines.	Grand Total.
	Works including Stores and general charges.	Rolling-stock.	Total.		
	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.
1913-14§	9·30	7·31	16·61	1·86	18·47
1936-37 including Burma .	1·08	—0·80	0·28	..	0·28
1936-37 excluding Burma .	1·16	—0·66	0·50	..	0·50
1937-38	0·63	—0·06	0·57	—0·05	0·52
1938-39	1·78	0·49	2·27	0·06	2·33
1939-40	2·89	0·89	3·78	0·70	4·48
1940-41	1·89	0·41	2·30	0·01	2·31

* £2,575,000 representing share capital of the Great Indian Peninsula Railway paid off during 1925-26 has been converted at the average rate of exchange for that year and the balance of £118,246,689 at the rate of 1*s*. 6*d*. to the rupee.

† Includes Rs. 8,87,000 representing outlay on the Alnavar-Dandeli Railway.

§ Includes Burma.

NOTE.—A part of the capital expenditure on Provincial railways (14,61) shown separately in previous years has been included under direct expenditure by Government (13,22) and the balance (1,39) representing expenditure on a siding has been omitted.

29.2. The distribution of the capital outlay in 1940-41 over the different State-owned lines is shown in the summary below:—

(Figures in lakhs.)

Railways.	Open Lines.			New lines.	Grand Total.
	Works, etc.	Rolling stock.	Total.		
	Rs.	Rs.	Rs.	Rs	Rs.
Bengal Nagpur	49	7	56	..	56
Bombay, Baroda and Central India	—2	5	3		3
Eastern Bengal	1,85	28	213	..	2,13
East Indian	61	14	75	..	75
Great Indian Peninsula	—1,14	—7	—1,21	..	—1,21
Madras and Southern Mahratta	9	1	10	..	10
North Western	—33	—10	—43	1	—42
South Indian	16	1	17	..	17
Other Indian railways	18	2	20	..	20
Total	1,89	41	2,30	1	2,31

30. Mileage of lines opened during 1940-41.—224 54 miles of railways were opened to public traffic during the year as under.—

	Miles
5′-6″ gauge	92 41
3′-3⅜″ gauge	132 13
Total	224 54

Name of line.	Gauge.	Mileage.	Owner.	Working Agency	Date of opening
Sind Right Bank Feeders— (i) Broad gauge conversion (N. G to B G) Larkana to Silra Shahdad Kot	5′ 6″	32 16	State	North Western Railway	29th July 1940.
(ii) New line; Silra Shahdad Kot to Jacobabad.	5′ 6″	51 82	Do	Do.	29th July 1940.
Cochin Railway Extension and Harbour Railway (Idappalli Ernakulam Extension)	5′ 6″	8 43	Indian State	South Indian Railway	1st October 1940.
Total	..	92 41			
Phalodi-Pokaran	3′ 3⅜″	35 48	Indian State	Jodhpur Railway	27th July 1940
Sagara-Talaguppe	3′ 3⅜″	9 51	Do.	Mysore State Railway	10th November 1940.
Mohindargarh-Rewari	3′ 3⅜″	30 76	Do	Bikaner State Railway.	24th February 1941
Sikar to Fatehpur section of Sikar-Bissau Extension	3′ 3⅜″	29 37	Do	Jaipur State Railway	*6th April 1940
Hadmatia Dhrol-Jodiya extension	3′ 3⅜″	27 01	Do.	Jamnagar Dwarka	3rd October 1940.
Total	..	132 13			

*For passenger traffic only

The construction of the remaining section of the Mudkhed to Adilabad line of the Nizam's State Railway was suspended due to war conditions.

31. Mileage of lines sanctioned in 1940-41.—No new line was sanctioned for construction.

32. Surveys.—Due to the paucity of material available for construction and other difficulties brought about by the war, very few surveys came up for consideration during the year under review. At the instance of the Mysore Government, however, the South Indian Railway was instructed in August, to take in hand the traffic survey of the Chamarajangar-Satyamangalam-Mettupalaiyam Railway, at the cost of that Government. The intention of the Mysore Government was to collect all the necessary preliminary data which would facilitate the work being taken in hand as soon as conditions permitted.

33. Lines under Construction during 1940-41.—All the lines on which construction was actively pursued during the year are reported under the heading of " Lines opened during 1940-41 ". No new construction was undertaken and it was necessary to suspend work on the Mudkhed-Adilabad construction, after considerable progress had been made on the earth and masonry work, as reported in the review for the year 1939-40.

34. Lines opened during 1940-41.

34.1. Sind Right Bank Feeder.—As foreshadowed in last year's report, the progress made on this important scheme enabled its opening for traffic throughout its entire length of about 84 miles on the 29th July 1940. The line is intended to provide adequate facilities for the transport of agricultural produce from the newly-irrigated areas on the right bank of the Indus.

34.2. *Cochine Railway Extension and Harbour Railway.*—This line, though constructed during the previous year, was not opened for traffic pending the completion of the line within the port area. As the latter was completed during the year, the entire length of 8·43 miles was formally opened on 1st October 1940.

34.3. Phalodi-Pokaran.—This line of 35·48 miles which serves the important town of Pokaran, was completed by the Bikaner Durbar and opened for all kinds of traffic on the 27th July 1940.

34.4. Sagara-Talaguppe.—This line, though started in June 1938, was only completed and opened for traffic on 10th November 1940, due in great measure to the difficulties experienced in the receipt of permanent way and other materials. It is an enterprise of the Mysore State and though less than 10 miles long, will open up an undeveloped and backward tract of country and also form a cheap means of transport for the materials required in connection with the Hydro-Electric Scheme.

34.5. Mohindargarh-Rewari.—This line of over 30 miles forms the third and last section of the scheme for a railway on the metre gauge from Sadulpur to Rewari. The first two sections aggregating 56·44 miles were opened in February 1939, and the last on 4th February 1941, making a total length of over 87 miles. The construction was carried out by the Bikaner State Railway.

34.6. Sikar-Fatehpur.—As reported last year, work was deferred on a length of 18·62 miles out of a sanctioned total of 47·88 miles of a scheme for a railway from Sikar to Bissau. The section Sikar to Fatehpur, 29·37 miles, was however, pushed on with and the line was opened for passenger traffic only on 6th April 1940. The line was constructed by the Jaipur State Railway.

34.7. Hadmatia-Jodiya.—Progress on this line of 27·01 miles has been much slower than was anticipated when it was approved for construction in August 1938. The line was, however, finally completed and opened for traffic by the Jamnagar and Dwarka Railway Administration on 3rd October 1940.

It serves an area covering 32 villages and towns and affords an outlet to Jodiya, an important sea town which with the advent of the railway is likely to become an important centre of sea-borne trade.

35. Lines closed during 1940-41.—Apart from the lines referred to in paragraph 14 of Chapter I, no other lines were closed during the year under review.

36. Open Line Improvements.—The programme of open line works consisted mainly of improvements of signalling arrangements, shifting of ghat stations, additional workshops and line facilities, improved water supply and additional hospital facilities as detailed below —

36.1. Provision of Lock and Block System of working on the Grand Chord between Sitarampur and Moghalsarai.—As a result of experience and arising out of the very heavy traffic on the Grand Chord section of the East Indian Railway, it was found that the arrangement by which the block instruments were not interlocked electrically with the position of the starter signal controlling the entrance of a train into a block section had led to cases of breach of block where either " line clear " had been given for a second train before the first train had cleared the block section or the station in the rear had failed to restore the last stop signal to danger As a result of a series of such cases of breach of block culminating in a serious accident at Dehri-on-Sone on 24th April 1939, the whole situation was reviewed and it was decided that lock and block working combine ... e introduced on the Grand Chord between S ... 'he work was sanctioned at an estimated cost c

36.2. Replacement and Improvement of worn out Signalling and Interlocking including isolation on the Khurda Road—Waltair section.—In pursuance of the Railway Board's instructions the Bengal Nagpur Railway have been working stage by stage for some years past in pursuance of a programme of isolation of the main lines. An estimate amounting to Rs 6,74,137 of the cost of this work was sanctioned in June 1940

36.3. Shifting Sarisabari station from its present site.—There was a severe cutting in near Sarisabari due to an encroachment of the Brahmaputra river and in order
of 1940-41,
station limi
These works were sanctioned at an estimated cost of Rs 4,73,707 in December 1940

36.4. New high level ghat at Tistamukh Ghat.—Owing to the almost complete silting up of the channels the high level ghat sites at Tistamukh Ghat on the Brahmaputra became untenable and it was found necessary to complete a new high level approach bank and a high level ghat about 5 miles down-stream of the old Futchari station (Tistamukh Ghat) The work was sanctioned at an estimated cost of Rs 3,66,923 in July 1940

36.5. Shifting of ghats at Bahadurabad to new sites.—The regime of the Brahmaputra river after the 1940 monsoon was changing in the vicinity of Bahadurabad ghat station and local silting was taking place at the confluence of down-stream channels These necessitated the immediate provision of new facilities to suit both monsoon and cold weather conditions An estimate amounting to Rs 3,57,702 of the cost of shifting of the low level ghat about 4 miles down-stream of the existing one for cold weather and of the high level ghat to a site about 2 miles down-stream of the existing one for monsoon was sanctioned in March 1941.

36.6. Provision of a new ghat at Jiapari, Eastern Bengal Railway.—Due to the existing ghat at Mahadebpur on Sara-Sirajganj Railway having been silted up almost entirely, as a result of 1939 floods, it was found necessary to provide a new high level ghat at Jiapari The work was sanctioned at an estimated cost of Rs 1,65,247.

36.7. Establishment of two out-station Depots for repair of wagons at Abu Road and Mhow stations, Bombay, Baroda and Central India Railway.—The repair facilities in the carriage and wagon shops at Ajmer, which are the only shops available for the purpose on the metre gauge system, were inadequate to deal with the number of wagons requiring periodical overhaul, with the result that wagon stock repairs fell into arrears. Arrangement was, therefore, made for the establishment of two out-station depots at Abu Road and Mhow, at an estimated cost of about Rs. 1 lakh, for repairs of wagons on the metre gauge system.

36.8. Improved facilities for Saidpur workshops, Eastern Bengal Railway.—The existing facilities in the Saidpur workshops were inadequate and unsatisfactory for modern workshop practices, and consequently the scheduled repairs of engines were thrown into arrears. In order to ensure safety and to maintain the efficiency of the service it was essential for the arrear repairs to be carried out and to do this certain additional facilities were sanctioned in September 1940 at the Saidpur shops at an estimated cost of about Rs. 5 lakhs. These facilities include the extension of the existing stores building, additions and alterations to the existing Works Manager's Office, better lighting arrangements, provision of two electrically-driven cranes and certain works for the Mechanical Department.

36.9. Remodelling of Bezwada station yard, Madras and Southern Mahratta Railway.—Since the last remodelling of the Bezwada station yard about 20 years back, the volume of traffic offering at the yard has so considerably increased that it is impossible to deal with it without serious delays and some loss of traffic due to the necessity of imposing restrictions on booking and of diversions through other routes. To improve the existing state of affairs, sanction was accorded to a scheme, estimated to cost about Rs. 4½ lakhs, for the provision of additional reception and despatch lines and sorting grids at the Bezwada station yard.

36.10. Moghalsarai Electric Power House Remodelling, East Indian Railway.—The load at the Moghalsarai station increased considerably, chiefly due to the developments at the plant depot and in the marshalling yard. Further extra power was required at Kashi for the regirdering of the Dufferin Bridge over the Ganges. A scheme for remodelling the Power House was, therefore, sanctioned at an estimated cost of Rs. 1,21,000 in June 1940.

36.11. Augmentation of Tatanagar Water Supply, Bengal Nagpur Railway.—The source of water supply at Tatanagar for loco. purpose was a storage reservoir. Its capacity was insufficient to meet the loco. requirements and the site of reservoir did not admit of any enlargement of it. The domestic supply of water was also insufficient. A scheme for a second supply from the Khorkai river at Bagbera with an installation of a Treatment Plant was under consideration and accordingly an estimate amounting to Rs. 2,24,000 of the cost of augmentation of the Tatanagar Supply was sanctioned in April 1940.

36.12. Hospital at Sibi, North Western Railway.—Since it came into existence about ten years back, the railway hospital at Sibi has been housed in a kutcha building which is considered unsafe especially in an area which is liable to frequent earthquakes. Sanction was therefore, accorded to the provision of a new pucca building conforming to modern hospital requirements and medical staff quarters at Sibi at a total cost of Rs. 60,000.

37. Important Works Sanctioned.

37.1. Additional line facilities on the Moradabad Division, East Indian Railway.—A brief mention of this scheme was made in the report for the last year. During the year under review, sufficient progress was maintained in respect of the various works comprising this scheme. An abstract estimate for this scheme, sanctioned by the Railway Board in February 1941, amounted to about Rs. 26 lakhs. It is anticipated that all the works included in this scheme will be completed during the year 1941-42.

37.2. Second Down line between Ondal and Khana, East Indian Railway.—The necessity had long been felt for improving the existing daily capacity, which

was limited to 24 trains each way, of the section between Ondal and Khana Junction, which formed a bottle-neck of double line track between two sections, one quadruple and the other of three lines. In fact the position on occasions became so bad that the railway had to restrict the loading of goods and was unable to meet the demands made on it. A scheme, estimated to cost about Rs 39 lakhs, was, therefore, taken in hand for the construction of an additional down line between Ondal and Khana and for certain additional facilities at stations for the up direction The scheme was programmed to be carried out in three stages. Stage I, which comprised a second down line between Ondal and Oyaria and between Panagar and Mankar, was sanctioned in July 1940 at an estimated cost of about Rs. 19 lakhs, and is in hand

The completion of Stage I will be followed by Stages II and III which consist of extensions of the additional line from Oyaria to Panagar and from Mankar to Khana, thus completing the provision of the third line from Ondal to Khana.

37.3. Increased facilities on the Dum-Dum Majherat section, Eastern Bengal Railway.—Serious difficulties were being experienced on the Eastern Bengal Railway in handling the traffic between Ballygunge station and the Docks as the line was quadruple up to mile 5-B, double from that point to Majherat and single from Majherat to Budge Budge. Thus the traffic originally passing on four lines to the Docks was ultimately concentrated on a single line at Majherat station. The position was further complicated by the fact that on account of a heavy gradient near mile 5-B and the consequent restrictions on line clear working, the length of the line from Ballygunge to Majherat in practice frequently became a single Block Section. The matter of improving the position became one of urgency also owing to the decision to provide increased facilities on the Ondal-Khana Section of the East Indian Railway and a proposal to close the Bengal Nagpur Railway Shalimar ferry, which together would have the effect of appreciably increasing the number of trains to be dealt with on the section.

The means adopted to improve the situation were to provide automatic signalling on the section and to eliminate the steep gradient near mile 5-B This scheme, which is estimated to cost about Rs. 5 lakhs, is an alternative to much costlier proposals considered which entailed the addition of one and two more lines on the section

38. Bridge Strengthening Programme.

38.1. Strengthening Protection Works at Kosi Bridge No. 2, between Kursela and Katareah stations, Bengal and North-Western Railway.—The changing course of the Kosi river between Kursela and Katareah stations formed a threat to the safety of the Kosi Bridge No 2 and it was therefore considered essential to carry out certain works so as to strengthen the bund and present a better streamlined face to the water flow These works which are estimated to cost about Rs. 3 lakhs include the extension of the apron of the right up stream guide bank, widening the guide bank near the right abutment and pitching round piers Nos. 1 to 8 of the bridge

38.2. Strengthening of Bridges on the Bina-Katni section, Great Indian Peninsula Railway.—The goods traffic on the Bina-Katni section being heavy, it often reached the limits which taxed its capacity. In view of the volume of traffic and the importance of the section as the most direct route from the Central India Coalfields to Western India, it was considered essential that the capacity of the section should be increased by substituting heavier type engines for the existing ones. This necessitated the strengthening of the bridges on the section. The minor bridges on the section required regirdering and this was sanctioned in June 1940 at an estimated cost of about Rs 3 lakhs The strengthening of major bridges was sanctioned in October 1940 at an estimated cost of a little over Rs $1\frac{1}{2}$ lakhs.

CHAPTER IV.

TRANSPORTATION.

A.—*Operating.*

39. Volume of traffic handled.—There was an appreciable increase in the volume of traffic which railways were called upon to handle during the year partly as a result of commercial and industrial activity and partly to meet the requirements of the Defence Department This is indicated by an increase both in " passenger miles " and " net ton miles " (exclusive of those run by departmental trains) of 7 49 per cent and 8 06 per cent respectively as compared with the preceding year In the following statement the figures of Class I Railways for the year under review are compared with those for the previous two years

(Figures in thousands.)

Particulars.	Class I Railways			
	1938-39	1939-40.	1940-41.	Percentage of increase (+) or decrease (—) as compared with 1939-40
Passenger miles	17,987,655	17,793,479	19,128,357	+ 7 49
Net ton miles	21,394,147	22,671,560	24,498,436	+ 8 06

If the performance of railways during the year 1940-41—first complete year of the war—is compared with that during 1938-39—the immediately preceding pre-war year—the increase in railway activities is still more striking, there being an increase of 14 5 per cent in " net ton miles ".

40. Train miles.—This increased volume of traffic was dealt with without a corresponding increase in train miles which were kept as low as possible consistent with traffic requirements The number of train miles run to carry the traffic referred to above is given in the table below.—

(Figures in thousands.)

Particulars.	1938-39	1939-40	1940-41.	Percentage variations with 1938-39	Percentage variations with 1939-40
Passenger (including proportion of mixed) train miles. *	111,117	108,999	108,622	— 2 25	— 0·35
Goods (including proportion of mixed) train miles †	68,530	71,744	74,020	+ 7·99	+ 3 17

Note.—Detailed figures of train miles of class I railways are given in statements 17 and 32 and those for each class II and III railways in statement 37 of Volume II of this Report.

* Includes mileage of electric locomotive and electric multiple unit trains but excludes departmental

† Includes mileage of electric locomotive trains but excludes departmental

With an increase in " passenger miles " of 7 49 per cent , the train miles were actually reduced by 0 35 per cent as compared with the previous year. Again with an increase of 8 06 per cent in " net ton miles " there was only an increase of 3 17 per cent in goods train miles

The trend of the volume of traffic and work done during 1929-30, 1932-33 and the last five years on Class I Railways is illustrated below on the basis of index figures :—

Year.	* Passenger miles.	* Coaching vehicle miles.	* Passenger train miles.	* Freight ton miles.	* Wagon miles.	* Goods train miles.
1929-30	100	100†	100	100	100†	100
1932-33	77	89†	87	81	83†	81
1936-37	79	94†	96	100	100†	97
1937-38	84	96†	102	110	105†	103
1938-39	83	98	104	107	108	105
1939-40	83	96	102	113	112	110
1940-41	**89**	**98**	**102**	**122**	**118**	**113**

* Includes figures for Mysore State Railway.

† Excludes Mysore State Railway for which figures are not available.

A fuller reference to the operating results of railways is made in the paragraphs below reviewing the passenger and goods train services.

41. Passenger trains.

(Figures in thousands.)

Particulars.	Class I Railways.					
	Broad gauge.			Metre gauge.		
	1939-40.	1940-41.	Percentage of variations with 1939-40.	1939-40.	1940-41.	Percentage of variations with 1939-40.
Passenger miles	12,373,114	**13,329,347**	**+ 7·73**	5,217,871	**5,564,217**	**+ 6·64**
Coaching vehicle miles (including proportion of mixed).	1,029,452	**1,046,834**	**+ 1·69**	501,893	**500,698**	**— 0·24**
Passenger train miles* (including proportion of mixed).	72,481	**72,663**	**+ 0·25**	33,952	**33,406**	**— 1·61**

* Includes electric multiple unit suburban trains.

On broad gauge railways while passenger miles increased by 7·73 per cent., the coaching vehicle miles increased by only 1·69 per cent. and the rise in the passenger train miles was relatively still less. On metre gauge railways an increase in passenger miles of 6·64 per cent. was achieved with a simultaneous reduction in the vehicle miles and train miles. These figures go to show that railways have made fuller use of their train services.

41.1. Passenger train services.—There were no important alterations in train service. Minor adjustments were made, as usual, to meet public and railway requirements. Some of the important features of the train service to be noted are :—

(i) A through inter and third class service was introduced between Lucknow and Delhi.

(ii) The running of the Deccan Queen was discontinued from 8th November 1940 to the end of March 1941, except before and after important holidays.

(iii) Provision of new air-conditioned coach services between Karachi and Lahore on the Karachi Mails daily; between Lahore and Kalka on the Simla Mails on alternate days; between Bombay and Peshawar on the Frontier Mails daily instead of five days a week; between Howrah and Delhi on Delhi Mails tri-weekly.

(iv) Conversion of the daily air-conditioned coach service between Bombay and Calcutta to a tri-weekly service in order to enable the new service between Calcutta and Delhi to be started

41.2. Punctuality and Speeds of trains.—The following table shows the percentage of passenger trains not losing time to the total number of trains run on all the Class I Railways during 1940-41 as compared with 1939-40.—

—	All trains (including electric multiple unit trains)	Mail and important through trains.	Mixed trains	Suburban trains.	Other passenger trains.
Broad gauge.					
1939-40 . . .	82·0	75·9	79·1	81·5	79·2
				92·2*	
1940-41	84·2	77·2	79·7	92·4	80·8
				91·5*	
Metre gauge.					
1939-40	84·9	79·4	87·7	93·5	82·2
				88·1†	
1940-41	84·9	78·8	87·9	97·5	82·1
				92·2†	

* Bombay, Baroda and Central India and Great Indian Peninsula Railways electric multiple unit trains.

† South Indian Railway's electric multiple unit trains.

Train running on the Bombay, Baroda and Central India, Madras and Southern Mahratta and North Western Railways suffered in punctuality owing to the running of large numbers of troop trains and also to overloads and the more intensive usage of engines with its attendant difficulties On the Madras and Southern Mahratta Railway there were also engineering restrictions over bridges on the east line which had a detrimental effect on the punctual running of trains Considerable improvement was, however, effected on the Eastern Bengal Railway which reported that the percentage of trains not losing time to the total number of trains run on the system was as follows:—

—	Mail and Express trains.	Suburban trains	Mixed trains	Other passenger trains
Broad gauge				
1939-40	61·1	70·2	62·4	60·0
1940-41	85·8	92·2	83·7	85·0
Metre gauge.				
1939-40	71·4	..	89·4	87·2
1940-41	85·7	..	91·2	92·0

There were no noticeable improvements in speeds of passenger trains as railways were required to maintain a margin of 10 per cent between time-table speeds and maximum sanctioned speeds, this allowance representing the permissible error of judgment on the part of drivers in gauging speeds on the run.

41.3. Employment of small power units.—There was no falling off in the efforts of railways to attract traffic by the use of rapidly accelerating rail cars and light steam trains. Though no new units were placed in service on the broad gauge, the Madras and Southern Mahratta Railway constructed a metre gauge rail car engined with a petrol motor which ran between Hubli

and Belgaum, while the North Western Railway were able to put back into service four of their large Ganz diesel rail cars which had been temporarily withdrawn from service.

42. Goods trains.

(Figures in thousands.)

Particulars.		1938-39.	1939-40.	1940-41.	Percentage variations with 1938-39.	Percentage variations with 1939-40.
Goods (including proportion of mixed) ton miles.	B.G.	18,283,959	19,352,820	**21,041,216**	**+15·1**	**+ 8·72**
	M.G.	3,023,616	3,226,810	**3,367,697**	**+11·4**	**+ 4·37**
Wagon miles (including proportion of mixed trains).	B.G.	2,117,936	2,203,143	**2,328,866**	**+ 9·96**	**+ 5·71**
	M.G.	648,238	686,266	**695,932**	**+ 7·36**	**+ 1·41**
Goods train miles (including proportion of mixed trains).	B.G.	48,018	50,462	**52,762**	**+ 9·88**	**+ 4·56**
	M.G.	18,758	19,457	**19,435**	**+ 3·61**	**− 0·12**

On the broad gauge railways while goods ton miles increased by 8·72 per cent., the wagon miles showed an increase of only 5·71 per cent. and the goods train miles of 4·56 per cent. On metre gauge railways an increase in freight ton miles of 4·37 per cent. was operated with an increase in wagon miles of 1·41 per cent. and decrease in train miles of 0·12 per cent.

42.1. Goods train services.—The average speed of goods trains (steam) was maintained at about the same level as last year, *i.e.*, 11·1 miles per hour for broad gauge and 10·9 for metre gauge railways. The running of through goods trains was actively followed up by certain railways in pursuance of a policy to curtail the time of goods in transit. The effect of the improvement in speeds of these through trains is not, however, yet reflected in the average speed figures of railways generally, as the results are partly obscured by other factors, *e.g.*, engineering restrictions, delays on account of heavier strain on line capacity as a result of heavy movements of military traffic, etc. Important changes made in connection with such through goods trains on certain railways are mentioned below :—

Eastern Bengal Railway (metre gauge).—A daily express goods service was run between Lalmanirhat and Katihar connecting with the express services between Lalmanirhat and Amingaon and Lalmanirhat and Santahar. This service has considerably speeded up cross traffic including petrol and oil traffic between the Assam Bengal and Bengal and North-Western Railways.

East Indian Railway.—A duplicate fast goods service between Moghalsarai and Howrah was introduced last year. A further acceleration in long distance traffic has been effected by running the original fast express goods trains from originating points with complete loads of long distance traffic only for stations Moghalsarai and beyond, the duplicate fast express goods being utilised to clear the residual and intermediate stations traffic. A third fast goods express over the Grand Chord between Moghalsarai and Howrah was introduced to cope with the traffic offering. All the fast express goods trains have been scheduled to arrive at Howrah so as to enable the merchandise to be in time for the morning markets. Through Asansol loads from Moghalsarai with traffic for Asansol and *viâ* and Calcutta area stations reached *viâ* Chitpur and Naihati were also introduced. This arrangement minimised detentions which previously occurred in the clearance of stock at intermediate stations especially in respect of cement and other important traffic *ex*-Dehri-on-Sone and Sone East Bank. Arrangements were also made to run separate loads from Moghalsarai for Cawnpore Central goods shed and Cawnpore goods Marshalling Yard, to ease the position on goods Marshalling Yard, Cawnpore, where difficulties and detentions were occurring.

Great Indian Peninsula Railway.—The mileage of through trains increased from 1,888,501 miles to 2,854,714. Through trains were run between the important junctions varying in distances from 250 to about 600 miles.

In addition, the following through services were also maintained:—

(a) Bi-weekly goods train service between Bombay and Shalimar.

(b) Down express goods service from Bombay to Poona.

(c) Oil special train service between Bombay and Itarsi

42.2. Reduction in transit time of small consignments.—Reference has already [illegible] running [illegible] consign- [illegible] in but at forwarding, receiving and intermediate tranship points. Further progress was made by railways and some other steps taken in this connection which may be noted are as follows:—

(1) A "through road van" programme on a reciprocal basis with contiguous foreign railways was arranged by certain railways. For instance, the Great Indian Peninsula Railway reported a through transit service between Nagpur, Secunderabad and Bazwada, resulting in reduction in the transit time of "smalls" between north and south of India and relief of Balharshah and Wardha from transhipment work. Similarly a through transit service between Bhusawal and Surat eliminated repacking work at Amalner.

(2) The main and branch line auxiliary services for clearing "smalls" were co-ordinated on the East Indian Railway and run strictly "to schedule". In certain main line van goods services an all-round speed of 10 miles per hour was maintained.

(3) The reduction in the number of transhipment points continued to receive the attention of railways. The Madras and Southern Mahratta Railway reported the closure of Miraj, Gadag, Dharmavaram and Raichur re-packing stations and concentration of work at Hubli, where improved facilities were provided.

(4) Movements of "smalls" traffic between specific points continued to be watched. The East Indian Railway reported an increase in the number of points from 130 to 154

(5) Certain railways increased the number of train Hammals to relieve the station staff from loading and unloading duties at small road-side stations.

(6) The Bengal Nagpur Railway organised a special section at Headquarters under a liaison officer responsible to the Transportation Manager and the Commercial Traffic Manager for a general control of these services and also provided Transhipment Van Clerks on certain trains

42.3. Train loads.—The small rise in train mileage, as compared with the rise in the increased volume of traffic, referred to in paragraph 40, was the result of an improvement in the average net freight loads of goods trains. On the broad gauge railways the net freight load per goods train (steam) was increased from 383 tons to 398 tons and from 166 tons to 173 tons on the metre gauge. The following railways achieved marked improvements in the average net load per train, as indicated below:—

Average net or freight weight per train.

Broad gauge.	Bengal Nagpur.	East Indian.	Great Indian Peninsula.	Madras and Southern Mahratta.	North Western.	South Indian.
1939-40	400	462	353	386	298	286
1940-41	414	483	369	405	315	305

Metre gauge.	Assam Bengal.	Bombay, Baroda & Central India.	Jodhpur.	Rohilkund & Kumaon.
1939-40	123	191	169	151
1940-41	134	207	180	167

43. Stock usage.—With little or no addition to the rolling stock equipment, as will be seen from the following chapter on rolling-stock and materials, the increased traffic which railways were called upon to carry, was handled by more intensive utilisation of the stock. In the following sub-paragraph the usage of stock during the year is reviewed.

43.1. Engine usage.—This is measured in terms of engine miles per engine per day either in relation to the number of engines on the line or engines actually in use, *i.e.*, excluding those not in effective use. On the former basis the daily mileage increased from 81 to 83 on the broad gauge but decreased slightly from 78 to 77 on the metre gauge; on the latter basis the results showed an improvement on both gauges, *i.e.*, an increase from 117 to 119 on the broad gauge and from 107 to 108 on the metre gauge. The percentage of engines under or awaiting repairs in Mechanical and Transportation Workshops was further reduced from 17·6 in 1939-40 to 17 per cent. on the broad gauge and from 13·2 on metre gauge to 12·5.

In addition to the improvement in engine miles per engine per day mentioned above there was also an improvement in the load handled by the engines. Thus the net ton miles per locomotive day showed an increase both in relation to the locomotives on line and locomotives in use.

—	Net ton miles per goods locomotive day on line.	Net ton miles per goods locomotive daily in use.
Broad gauge.		
1939-40	15,776	24,862
1940-41	17,154	26,661
Metre gauge.		
1939-40	7,467	11,410
1940-41	7,637	12,157

Improvements recorded on individual railways calling for notice are the following:—

Engine miles per day per engine in use.

	1939-40.	1940-41.
Broad gauge—		
Great Indian Peninsula (Steam)	138	142
Madras and Southern Mahratta	109	116
North Western	119	123
South Indian	119	126
Metre gauge—		
Bombay, Baroda and Central India	99	103

Engine miles per day per engine on line.

	1939-40	1940-41
Broad gauge—		
Bengal Nagpur	92	96
Bombay, Baroda and Central India . .	68	71
Great Indian Peninsula (Steam) . .	93	98
North Western	72	78
South Indian	83	86

Net ton miles per locomotive day in use.

	1939-40.	1940-41.
Broad gauge—		
Bengal Nagpur	30,135	31,337
East Indian	25,446	27,010
Great Indian Peninsula	27,649	30,416
Madras and Southern Mahratta . .	25,802	30,304
North Western	20,093	22,278
South Indian	18,516	21,243
Metre gauge—		
Bombay, Baroda and Central India .	13,533	15,095
Jodhpur	12,537	13,606
Mysore State	8,996	11,526

43.2. Wagon usage.—From an operating point of view improved usage of the wagons means their expeditious movement to destination This is reflected in the statistical unit, the average number of miles run per wagon day, both loaded and empty wagons being taken into account The figures for Class I Railways are as follows :—

—	Broad gauge.		Metre gauge.	
	1939-40	1940-41.	1939-40	1940-41.
Wagon miles per wagon day . . .	41·3	42·9	32·9	33·1

done by the total wagon stock of the and stabled during the period they he improvement in the movement of wagons recorded above gives only a partial record of the efficiency of the utilisation of wagons combines the results of wagon day and the nu satisfactory. Figures for Class I Railways are as follows :—

—	Broad gauge		Metre gauge.	
	1939-40.	1940-41.	1939-40.	1940-41.
Net ton miles per wagon day	367	392	159	163

It will be seen that while there has been an improvement of 3·87 per cent. in wagon miles there has been an improvement of 6·81 per cent. in the net ton miles per wagon day. Most railways contributed to the improved results. Improvements effected on individual railways which call for notice are :—

Wagon miles per wagon day.

	1939-40.	1940-41.
Broad gauge—		
Bengal Nagpur	42·5	44·3
East Indian	38·7	40·7
Madras and Southern Mahratta . .	56·7	61·8
North Western	37·1	38·9
Metre gauge—		
Assam Bengal	31·7	34·1
Eastern Bengal	27·8	32·4
South Indian	29·7	31·9

Net ton miles per wagon day.

	1939-40.	1940-41.
Broad gauge—		
Bengal Nagpur	426	456
East Indian	372	407
Madras and Southern Mahratta . .	474	520
North Western	275	301
Metre gauge—		
Assam Bengal	144	163
Bombay, Baroda and Central India . .	221	236
Eastern Bengal	117	134
South Indian	128	141

44. Efforts made to improve transportation services.—Improvements in operating results have been referred to in paragraphs 41 and 42. Some of the special steps taken to secure these results are referred to below :—

(i) A close and systematic watch was kept on the prompt release of good stock. Towards this end, the Eastern Bengal Railway introduced a new system of daily stock reports from stations which ensured greater accuracy in the accounting of wagons and presented detailed and precise data in a readily checkable form to the Transportation Officers. Congestions which used to to be caused previously at terminal points and transhipments due to booking in excess of capacities were considerably reduced by special control of loading by their head office. Similarly coal traffic from the East Indian and Bengal Nagpur Railways to *viâ* Santahar was so regulated as not to exceed the capacity of Santahar transhipment facilities, thus preventing heavy accumulation of loaded wagons. On the Great Indian Peninsula Railway arrangements were made to enable controllers on the Wadi-Raichur section to speak to the controllers of neighbouring railways.

(ii) Unloading and delivery on Sundays was introduced in goods sheds and sidings where practicable. Hours of work regulations were also suspended in certain cases in order to facilitate the unloading of stock in goods sheds.

(iii) The number of wagons under or awaiting repairs was reduced during the busy months by extending the date of overhaul where this could be done consistently with safety. On the East Indian Railway the scheme for concentration of intensive examination and petty repairs of wagons at selected goods sheds was functioning at three of the four key points selected for this purpose. This scheme provided that wagons, which upon examination in yards and goods sheds were found to have a defect requiring attention on sick lines, should be marked with special white labels and despatched in the direction of empties to be intercepted at key points

(iv) Greater efforts were made to pool engine power resources. The Bengal Negpur Railway fixed an allotment of engine power for various sheds basing calculations entirely on the link system of *working with " Extended runs " except in the case of engines* required for occasional traffic In this way, not only were the increased requirements met but it was found possible to loan a further number of heavy goods engines to other railways In addition to the 24 heavy goods engines made over to the East Indian Railway in 1939-40, 7 heavy goods engines were loaned to the Great Indian Peninsula Railway towards the close of the year 1940-41 The Great Indian Peninsula Railway where pooling arrangements and intensive engine user had been practised for many years went further to experiment inter-divisional pooling of engines. On the Madras and Southern Mahratta Railway pooled goods and passenger engine link working was extended on the broad gauge and possibilities explored of obtaining a more intensive engine use on the metre gauge in conjunction with efficient and systematic maintenance

(v) Facilities in regard to yards were examined with a view to speed up the disposal of wagons A fuller reference of the improvements effected in the marshalling yards is made in paragraph 48.

45. **Operating position.**—The strain of the increased traffic was felt in varying degrees, the main " through " sections having to bear the heaviest brunt. A measure of the additional movements thrown on railways as a result of one of the several factors contributing to increases in traffic, *viz* , shortage of shipping space, may be obtained from the fact that the rail-borne tonnage of coal across India to Bombay and Karachi increased in 1940-41 by 570 per cent. and 120 per cent. respectively as compared with 1938-39.

Railways were, however, able to cope with the traffic smoothly until December 1940 but from the following month to the end of March arrears in loading to varying extents were reported by practically all broad gauge railways. Arrears were, however, most pronounced on the Great Indian Peninsula Railway owing to heavy increases in the east to west coast movements and traffic to and from military depôts situated on the Great Indian Peninsula Railway. By the beginning of February all the sections on the Great Indian Peninsula Railway excepting the southern section fell into arrears. The latter also had its turn when heavy troop movements commenced in the middle of February which [illegible] a large number of Italian war prisoners. [illegible] empty stock movements, made such inroa[illegible] in the southern section of the Great Indian Peninsula Railway that comparatively little goods could be moved and loading on this section also got seriously into arrears. As a result, Great Indian Peninsula Railway was constrained to impose restrictions almost continuously during the latter quarter of the year both in regard to the local loading as also on the receipts of loaded wagons from foreign railways to their junctions Shortage of empties for coal was also reported on the Bengal Nagpur and East Indian Railways towards the last quarter of the year but on the whole the requirements of

the trade appears to have been met satisfactorily. During twelve months from January to December 1940, the total output from Bengal, Bihar and Orissa coalfields was 23,911,699 tons. From this figure 10 per cent. is required to be deducted (according to the report of the Director General of Statistics for 1929) on account of consumption at collieries and wastage. The amount available for despatch was, therefore, 21,520,529 tons. As against this the total despatches were 20,842,778 tons or 97 per cent. of the total quantities available for despatch.

46. Wagon position in the pool.

46.1. Broad gauge wagon pool.—The number of public service wagons (in terms of 4-wheelers) available at the end of the year was 152,785, *i.e.*, 876 more than at the end of 1939-40. The number of wagons loaded was 5,086,319 being an increase of 152,520 wagons or 3·15 per cent. over the previous year. The resources of the broad gauge wagon pool were strained to capacity during the intensive peak traffic periods. From the middle of December all wagons were drawn into service. The demands on the pool were heaviest from the Great Indian Peninsula Railway (carrying traffic directed from the east to the west coast) which at times retarded their efforts to meet their interchange obligations. The highest loading was recorded in the period ending 31st January 1941 when an average of 16,196 were loaded daily. This exceeds all previous records except that of 17,339 for period ending 29th February 1940.

Coal despatches during the year were greater by 538,238 tons than the previous year, viz., 2·42 per cent. Coal loading demands on the Bengal Nagpur Railway were not fully met during January, February and March 1941 and on the East Indian Railway short loading occurred during the period 27th January 1941 to 6th February 1941 and 13th February 1941 to the end of March 1941.

46.2. Metre gauge wagon pool.—A reference was made in the last year's report of wagon pool formed for the 17 metre gauge railways in Northern India. The number of public traffic wagons on the 31st. March 1941 was 50,211. The heaviest loading was recorded during the period ending 20th February 1941 when an average daily loading of 7,654 wagons was attained. There was pressure on the metre gauge wagon pool to the end of May 1940 owing to the call for wagons to move famine traffic. Demands on the pool were at no time as great as in the previous year but during the months January to March 1941 practically all wagons were drawn into service.

47. Neutral Examination of Interchanged Stock.—The staff working under the Director of Wagon Interchange continued to examine wagons interchanged between railways at the following junctions:—

Agra Cantonment.	Khanalampura.
Ajni-Nagpur.	
Chheoki.	New Delhi.
Gaziabad.	Waltair.

48. Marshalling and other Yards and stations and their working.—The following were some of the improvements made in the yards and stations and in the methods of their working.

Eastern Bengal Railway.—Certain additions and alterations were made to the Marshalling yards at Naihati, Chitpur, Santahar, Lalmanirhat and Katihar. At Naihati a subsidiary hump was provided which has relieved the main hump yard of the work entailed in forming rakes for the Mills sidings, thus making it possible to devote more time to sorting work. At Lalmanirhat, an independent exit from the down yard was brought into use and this has eliminated the shunting previously involved in the transfer of wagons between the main and the down yards. This has reduced shunting engine hours and also detention to through loaded wagons. At Katihar certain modifications in the interlocking of the communicating lines between the Eastern Bengal and Bengal and North-Western Railways goods yards across the Katihar-Manihari Ghat main lines enabled shunting of vehicles to be done simultaneously from both ends

East Indian Railway.—The marshalling and grouping orders to which reference was made in the last year's report were reviewed to cope with the changing conditions. These revised orders had reference mainly to the running of through long distance trains and acceleration of traffic generally. Short distance traffic also received attention. A large programme of improvements in the lay-out of station yards was also undertaken.

Madras and Southern Mahratta Railway.—The change effected in the working of the Tondiarpet Marshalling Yard whereby the wagons passing from the north-east to south-west line and *vice versâ* were passed over one hump of the yard, instead of two humps as previously, has produced satisfactory results.

North Western Railway.—A hump yard was provided at Ghaziabad Remodelling of the goods yard including the provision of a hump was completed at Bhatinda and a second hump was added at Khanalampura

B.—Commercial.

49. Alterations in rates and fares.—No changes of any major importance were made in the general scale of passenger fares or goods rates except in regard to coal, increased charges in respect of which were enhanced from 15 per cent. to 20 per cent. during the five months from November 1940 to March 1941. This enhancement was made with a view to induce the trade to build up their stocks during the slack period Railways, however, in conformity with their usual practice continued to make such alterations in rates and fares as were found necessary to meet traffic requirements The more important of these alterations are mentioned below:—

49.1. Passenger traffic.—Reduced fares were introduced by several Railways to popularise travel to hill stations. The Great Indian Peninsula Railway issued six-monthly rail-*cum*-road tickets of all classes from certain important stations on their system to Srinagar. Cheap tickets for all classes were also issued by the South Indian Railway during the summer months to health resorts. Certain mela concession fares were introduced during this year over the Great Indian Peninsula and His Exalted Highness the Nizam's State Railways. The Madras and Southern Mahratta Railway, in conjunction with other Railways, also introduced two-monthly return tickets at reduced fares for all classes between Madras and Delhi, New Delhi and Simla

49.2. Parcels Traffic.—Several Railways made further reductions in their parcel rates particularly for vegetables, fruits and milk

49.3. Goods Traffic.—It had been a long-standing practice on railways to quote schedule and station-to-station rates at owner's risk without the corresponding reduced rate at Railway risk. Recently Indian Railway Conference Association examined a list of all commodities for which such schedule and station-to-station rates had been quoted and where it was found that the risk attached to the carriage of commodities was not considerable the rates were quoted at Railway risk Reduced rates were also quoted for sugar booked from stations on the North Western, East Indian, Bengal and North Western and Rohilkund and Kumaon Railways to Chaman and Nok Kundi for export to Afghanistan and Iran respectively This was done to secure a market in those countries The new rates represent in some cases a reduction of 50 per cent on the old rates Other alterations made in rates on individual railways calling for notice are:—

Decreases.—Reduced rates were quoted (i) by the Assam Bengal Railway for timber from important Surma Valley stations to Calcutta, (ii) by the Bengal Nagpur Railway for paper in bales, (iii) for pig iron based on 1/10th pie per maund per mile inclusive of increased charge from Tatanagar, Burnpore and Bisco to Bomlar, Vizagapatam

Port and Madras, (iv) for cotton seeds, by the Great Indian Peninsula Railway, involving a reduction of 8 to 30 per cent. on the normal rates from principal cotton booking stations on that Railway to important stations, (v) for timber from Madras, Coconada and Vizagapatam to Bombay, by the Madras and Southern Marhatta Railway, to facilitate transport of timber from Burma and (vi) for empty beer bottles in wagon loads from Bombay, Calcutta, Karachi and Madras ports to Rawalpindi and Solan Breweries.

Increases.—Rates were enhanced (i) for cement carried for short leads over the Bombay, Baroda and Central India Railway, (ii) for Oils, Division C (Castor, Gingely, Groundnut, Linseed, Mowha, Mustard, Rape seed and vegetable oils not otherwise classified) from stations in the United Provinces to Calcutta, on the recommendation of the Railway Rates Advisory Committee which found that these rates had been unduly depressed and prejudiced the Calcutta Millers in their competition in common markets, (iii) for Hydrochloric and Nitric acids from Ranipet to all Madras and Southern Marhatta Railway stations and also to certain foreign railway stations. Temporary exemptions were allowed from freight increases in respect of (*a*) jute and tea over the Eastern Bengal Railway owing to the inability of Steam Ship Companies to make similar increases in their rates, (*b*) for coal booked to Surma Valley section of the Assam Bengal Railway in view of the river competition. Later in the year these commodities became subject to the general increased charges.

50. **Adjustments in rates and fares to counteract the adverse effects of the increased charges.**—At the time freight and fare increases were brought into force, railways were authorised to make necessary adjustments if these were found necessary in the mutual interests of trade and railways. It was, however, not found necessary to make any large scale adjustments.

51. **Simplification of tariffs and measures adopted to expedite quotation of rates.**—This subject continued to receive the attention of railways. Some of the measures taken to simplify work for the staff and to expedite quotation of rates, are indicated below :—

Assam Bengal Railway.—Rate registers for booking outward traffic locally over the railway were supplied to all stations. These registers contain not only all local station-to-station rates chargeable from each of the several stations but also particulars of schedule rates having general application in "local" booking.

Bengal Nagpur Railway.—Rate registers for booking outward traffic to foreign railways were supplied to all stations.

Jodhpur Railway.—Action was initiated in regard to the issue of station rate registers.

Pamphlets containing rates for cotton full-pressed and wheat from stations in Sind to various destinations were published and distributed to traders free of charge.

North Western Railway.—To avoid the quotation of a large number of special rates, a general reduction applicable in all bookings over this railway, has been made for cloth cuttings and old gunny rags.

Rohilkund and Kumaon Railway.—To facilitate the quotation of rates to the public the railway has joined the Information Bureau at Cawnpore, organised by the East Indian Railway.

52. **Facilities for dealing with traffic.**—The particulars of new booking offices and out-agencies opened during the year by the principal Railways are given in paragraph 105.

Though the provision of sidings to serve military depôts was a "first call" on Railways, it was found possible to provide additional facilities for civil trade. The East Indian Railway opened new assisted sidings to

serve (i) the Bangeswari Cotton Mills at Rishra, (ii) Cawnpore Ordnance Inspectorate, (iii) Shiva Parbati Dal and Rice Mills at Sultangunge, and (iv) the projects of Messrs. Aluminium Corporation of India, Ltd., situated between Raniganj and Kalipahari stations The Great Indian Peninsula Railway opened (i) Anglo-Thai Corporation, Ltd., siding at Mankhurd, and (ii) Ramchandra Badriprasad Gaur's siding at Jukehi.

Additional godown accommodation, sheddings and platforms were also provided by various railways.

53. Co-ordination of road and rail.—The main direction in which railways endeavoured to secure co-ordination of road and rail services was by the opening of out-agencies in outlying areas, thus affording through booking facilities to the public. The Bombay, Baroda and Central India Railway made special arrangements with the Gwalior and Northern India Transport Agency for the running of co-ordinated rail-road services on certain competitive sections parallel to roads The result of this experiment may disclose a new line of approach to the problem of co-ordination of road-rail services.

An interesting development reported during the year was the working of motor buses and lorries in Calcutta and Madras on producer gas plant, burning charcoal, which afforded considerable economies on the fuel bill. In areas served by the South Indian Railway, 464 buses and 40 lorries out of a total of 730 buses and 40 lorries were fitted with producer gas plant

54. Contact with business community.—Although, on account of the heavy day-to-day burden, arising from the war effort shouldered by railways, officials were extremely busy attending to problems that needed urgent attention, the necessity for maintaining the closest touch with the business community was not forgotten. Full use was made of such channels as the local advisory committees consisting of members drawn from industry, commerce and trade. Close touch was maintained with chambers of commerce, on many of which railways are represented Closer contact meetings continued to be held in Bombay and Calcutta as in previous years.

Tours were undertaken by the Chief Commissioner, Financial Commissioner and Member Transportation, during which a number of meetings took place with various commercial bodies. Railways, through the medium of their own organisations, consisting as they do of Commercial Officers, Inspectors and Canvassers, continued to keep in the closest touch with current business thought.

The annual meeting between the Railway Board and coal trade representatives was held as usual.

55. Refund on unused tickets.—The question of expediting the settlement of claims for refund on unused or partially used tickets continued to receive the special attention of railways.

The system introduced last year on the State-managed railways, of refunding overcharges up to Rs 10 on local traffic, prior to certification by the Accounts office gave satisfactory results and was continued during the year. This system was also extended by the Eastern Bengal Railway to through traffic interchanged with the other State-managed railways

56. Claims for compensation and refunds.—The following statements for Class I railways (except Jodhpur and Mysore) show for 1940-41 —

A. *the number of claims in respect to goods or parcels damaged or lost received and for goods and parcels overcharged and the average time taken in their settlement;*

B. *the number and value of claims paid in respect of goods or parcels lost or damaged under main causes;*

C. *the number of court cases in respect of goods or parcels lost, damaged or delayed and their disposal.*

STATEMENT A.

Item No.	Particulars.	A. B.	B. & N. W.	B. N.	B., B. & C. I.	E. B.	E. I.	G. I. P.	M. & S. M.	N. S.	N. W.	R. & K.	S.
1	Number of cases involving compensation for goods or parcels lost, damaged, or delayed carried over as unsettled at the close of the preceding year	153	448	1,099	[illegible]	[illegible]	[illegible]	120	[illegible]	129	[illegible]	140	
2	Number of claims received (and re-opened) for compensation on account of goods or parcels lost, damaged, or delayed during the current year	1,078	2,916	6,428	[illegible]	6,623	[illegible]	9,222	[illegible]	[illegible]	12,743	[illegible]	
3	Number of claims referred to in items 1 and 2 settled during the year	[illegible]	2,923	[illegible]	12,312	[illegible]	11,721	9,624	[illegible]	910	12,321	[illegible]	
4	Balance outstanding as unsettled at the close of the year	244	441	[illegible]	1,241	1,237	1,581	[illegible]	[illegible]	199	1,567	[illegible]	
5	Net amount paid in compensation . Rs.	8,914	19,269	29,443	[illegible]	1,23,227	21,454	1,23,427	24,079	[illegible]	1,01,823	3,726	2
6	Percentage sum paid in compensation (item 5) bore to gross earnings .	0·06	0·07	0·05	0·06	0·29	0·02	0·09	0·04	0·12	0·11	0·07	
7	Average time in days taken in settlement of claims shown under items 1 and 2 .	27	62	74	54	45	73	14	21	61	21	65	
8	Number of applications received for refunds on goods and parcels overcharged	[illegible]	5,520	4,635	12,217	9,674	[illegible]	7,442	5,454	1,723	10,422	795	
9	Average time taken in settlement of claims shown under item 8. Days	25	61	59	27	[illegible]	24	42	22	29	24	44	

General increase occurred in the number of claims received during the year, with a consequent increase in the number of claims outstanding at the close of the year. Number of applications for refunds of overcharges on goods and parcels also was higher than in the previous year but most railways showed an improvement in the average time taken in settlement of these claims.

STATEMENT B.

Item No.	Particulars.		A. B.	B. & N. W.*	B. N.	B., B. & C. I.	E. B.	E. I.	G. I. P.	M. & S. M.	N. S.	N. W.	R. & K.	S.
1	Claims paid on account of goods lost.	No.	158	815	2,103	3,359	1,109	4,218	1,818	182	105	350	106	
		Value Rs.	2,426	8,177	38,613	20,951	43,751	69,124	17,034	2,960	1,579	6,698	2,101	1
2	Claims paid on account of goods stolen.	No.	202	570	159	273	63	1,346	1,666	150	27	1,501	23	
		Value Rs.	5,105	8,140	3,760	7,007	6,353	10,069	21,813	4,403	696	15,238	545	
3	Claims paid on account of goods damaged by wet.	No.	51	28	230	1,582	327	1,074	2,445	254	147	630	48	
		Value Rs.	1,141	802	6,487	9,569	23,147	13,051	17,150	5,823	1,266	16,059	810	
4	Claims paid on account of goods damaged by fire.	No.	..	..	3	6	1	4	10	2	..	..	..	
		Value Rs.	..	..	261	181	2,440	207	6,769	212	..	..	..	
5	Claims paid on account of goods damaged by breakage.	No.	48	7	42	122	4	63	233	47	58	70	3	
		Value Rs.	1,242	505	672	2,524	157	2,738	4,030	723	580	2,022	91	
6	Claims paid on account of parcels and luggage lost and stolen.	No.	81	110	155	180	434	722	256	57	38	72	10	
		Value Rs.	1,203	1,299	4,253	837	6,070	13,667	2,479	1,165	264	1,511	147	
7	Claims paid on account of other causes.	No.	147	276	289	2,150	1,361	580	1,258	1,784	445	2,074	77	
		Value Rs.	1,306	4,726	16,028	30,643	46,018	23,704	30,885	28,095	1,494	25,801	2,273	

* Miscellaneous recoveries amounting to Rs. 4,230 have not been deducted from the value figures.

Both the number and value of claims paid was higher than in the previous year under all the classes of claims analysed above. The largest increases occurred under 'claims paid on account of goods lost, goods damaged by wet and other unclassified causes'. The value of claims increased both by the larger number of claims paid as also the higher price level of goods that prevailed this year.

STATEMENT C.

Item No.	Particulars.	A B	B & N.W.	B N	B, B & C.I.	E. B	E I	G.I P	M. & S M.	N S.	N W	R.& K.	S I.
1	Number of suits filed in court (or pending from the previous year) for the recovery of compensation in respect to goods or parcels lost, damaged or delayed .	21	70	103	102	57	122	122	65	6	65	7	45
2	Number of such suits settled out of court .	7	10	11	33	21	6	10	6	2	4	2	6
3	Number of suits dismissed . .	5	29	19	7	15	19	29	25	1	26	1	11
4	Number of suits decreed	2	6	6	2	3	12	8	3		6		3
5	Number of suits pending	7	25	67	55	18	85	76	31	3	25	4	25

Suits filed in court for recovery of compensation were also comparatively higher than in the previous year.

57. System of ticket checking and prevention of ticketless travel.—*The methods adopted by the various Class I railways to detect and prevent* ticketless travel were generally the same as in previous years. The North Western Railway reported considerable difficulty in dealing with unruly mendicants travelling without tickets and assaults on checking staff. On representation to the Sind Government, arrangements were made for the appointment of unarmed police squads, who travelled with trains with the object of protecting the ticket checking staff

The following statement shows the total number of passengers detected travelling without proper tickets on Class I railways during the year 1940-41:—

Railway.	No of Passengers.
Assam Bengal	70,069
Bengal Nagpur	57,545
Bengal and North Western	368,176
Bombay, Baroda and Central India . . .	399,931
Eastern Bengal	265,754
East Indian	263,358
Great Indian Peninsula	207,707
Jodhpur	18,830
Madras and Southern Mahratta	141,023
Mysore State	11,237
His Exalted Highness the Nizam's State	7,736
North Western	407,458
Rohilkund and Kumaon	61,240
South Indian	151,169
Total .	2,431,633

Reference has been made to the bill passed during the year with a view to further prevention of Ticketless travel in paragraph 4 on 'Railways and the Legislature'

58. Mela traffic.—Although Railways were dealing with a very considerable increase in both passenger and goods traffic, it was found possible to cater for the attendance at the periodical fairs. The usual arrangements were made for opening temporary booking offices, adequate water supply, special medical facilities and sanitary arrangements. Specials were run for the larger fairs, and the stock on passenger trains was augmented as and when necessary. Generally speaking, the attendance at the principal *melas* showed an increase over previous years, these increases being most noticeable on the Assam Bengal, Great Indian Peninsula, Eastern Bengal, and East Indian Railways.

59. Measures taken to ensure civility and honesty on the part of railway staff.—Throughout the year this matter continued to engage the attention of railways. In all cases to which the attention of the administrations was drawn, prompt action was taken, and a decline in the number of cases reported was noticed.

CHAPTER V.

PUBLICITY.

60. Central Publicity Bureau.—On account of the war the normal publicity activities of railways were curtailed to some extent. The Central Publicity Bureau was transferred to Calcutta and was amalgamated with the Publicity Offices of the East Indian and the Eastern Bengal Railways on the 1st July 1940.

The Indian Railways Bureau, London was closed on the 7th September 1940.

60.1. Advertisement through posters, handbills and pamphlets.—Advertising was on a reduced scale and was principally in connection with the Poojah holidays, Hill stations in India, and Buddhist traffic.

No new pamphlets were printed or ordered The demands from railways, tourist agencies, and individuals were met from stocks on hand.

60.2. Photographs.—The year was a record year for the Photographic Section 1,633 photographs were taken, and over 30,000 prints made. Of this number 24,000 prints were supplied to the Government of India for propaganda purposes, and the balance distributed to various tourist agencies, newspapers, periodicals, and railways. A few photographs were also sent overseas.

One Publicity Officers' Meeting was held during the year.

61. Publicity by Railways.

61.1. Melas.—Publicity arrangements in connection with only 135 *melas* were undertaken this year. These were advertised by press announcements in newspapers, letter-press and pictorial posters, folders, handbills, beat of drum, and by other means In some cases the co-operation of the various union boards, municipal and other civil authorities was obtained for the purpose of introducing railway literature among villages situated in the interior. Special facilities were again provided by the Eastern Bengal Railway in fostering traffic to the Ganga Sagar Mela, and a talk on this *mela* was broadcast by the Calcutta Station of the All-India Radio

61.2. Handbills, folders, pamphlets and posters.—As a special advertisement feature in connection with the new Assam de Luxe Train, a tastefully printed brochure was printed by the Eastern Bengal Railway for general distribution among the public The Rail-Car and Rail-Air Services of the Nizam's State Railway were also advertised by the issue of a joint folder Pamphlets were also produced by the Bengal Nagpur Railway with a view to stimulating *mela* traffic on that Railway, by the Great Indian Peninsula Railway in connection with hill stations in India, and by the Madras and Southern Mahratta Railway in connection with their Christmas and New Year concessions The booklet dealing with the various attractions and travel facilities to the hill stations in the Nilgiris and Kodaikanal was produced by the South Indian Railway in conjunction with the various municipalities concerned On all the principal Railways together, 7,572,770 handbills, 570,050 folders and pamphlets and 144,002 posters were distributed

61.3. Reciprocal Publicity.—The reciprocal arrangements with the Postal Department by which railway publicity posters and pamphlets are displayed at Post and Telegraph offices in the interior in exchange for similar facilities for Postal advertisements at railway stations were continued by those railways participating in the scheme The arrangements entered into by the Great Indian Peninsula Railway with the ' Times of India ', and by the East Indian Railway with the ' National Herald ', by which free space in those papers are exchanged for a limited number of positions at certain railway stations was again renewed this year Railway slides were also

screened free of charge at many cinema houses in Calcutta and other stations on the East Indian Railway in exchange for free space at those stations.

61.4. Loudspeakers.—A loudspeaker set with a gramophone attachment was purchased by the Great Indian Peninsula Railway for the use of the Publicity and Propaganda Inspectors, and has proved of great value at the different *melas* where it has been utilized. Loudspeaker sets were also installed at important *mela* areas and stations on the East Indian Railway.

61.5. Cinema Car.—The North Western Railway cinema car continued to be utilized for propaganda purposes. This unit visited 180 stations and gave 284 shows. It is estimated that over 650,000 people attended these shows. The North Western Railway cinema lorries visited 341 important rural areas and gave 450 open-air performances at which it is estimated more than 500,000 attended. An interesting feature of these performances was the screening of a special 'Safety First' film emphasizing the need for caution when travelling, and at the time of entraining, detraining and crossing lines.

61.6. Newspaper Advertising.—The cost of advertising in newspapers by principal railways for 1940-41, amounted to Rs. 2,62,900 as against Rs. 2,32,806 in the previous year.

Prominence was given in the Press to the introduction of third class holiday season tickets over the Great Indian Peninsula Railway, and to the issue of cheap shopping tickets, zone, and all-India and local ticket schemes on the Bombay, Baroda and Central India Railway. Intensive advertising was also undertaken by the Bombay, Baroda and Central India Railway in popularising rail-*cum*-road tickets to Kashmir, the results of which were very satisfactory, 453 people taking advantage of these concessions as against 225 last year. Wide publicity was also given by the Madras and Southern Mahratta Railway to the issue of cheap return tickets for all classes between Madras and Delhi and between Madras and Simla. Another noteworthy feature in this railway's advertising was the prominence given in the Press regarding 'commercial enterprise', by means of which the public were informed that in view of the growing industrial development in South India, those interested would be given every assistance in selecting suitable sites for the erection of factories, warehouses, etc., best served by this Railway.

61.7. Trade advertisements.—The gross revenue secured from trade advertisements, bookstalls, bazar specials, etc., during the year by the state railways amounted to Rs. 3,73,205 against Rs. 3,42,249 in 1939-40.

This is principally due to the record earnings secured by the Bombay, Baroda and Central India Railway in the year under report.

62. Excursion trains.—In spite of a shortage of stock resulting from 'war traffic' on certain railways, several special trains were booked for educational and excursion parties. On the Bombay, Baroda and Central India Railway, eight special trains and thirty-four bogie loads were run. On the Bengal Nagpur Railway, ten third class local excursion trains were booked, carrying a total of 4,891 passengers, mostly from villages, from which a gross revenue of Rs. 73,700 was derived. On the South Indian Railway as a result of intense canvassing, 122 excursion parties travelled during the year. Four large parties of students travelled in special trains. Further, seven excursion parties in special trains and twenty-four parties in reserved carriages travelled during the period under review. A third class conducted excursion special was run by the Eastern Bengal Railway from Calcutta to Darjeeling in conjunction with the management of the Snow View Hotel, Darjeeling. Over a hundred tickets were sold.

63. Circular tours, zone tickets, etc.—These were advertised by railways at appropriate periods during the year. An increasing number of pilgrims and excursionists are taking advantage of circular tours introduced by northern railways for visiting places and shrines in South India.

64. Bazar specials.—A Poojah Bazar Special was again organised by the Eastern Bengal Railway over their broad and metre gauge sections, visiting thirty important stations, on that railway. Sixteen firms participated An open-air talkie cinema outfit accompanied the Special, and free open-air shows were given at all the stations visited. It is estimated that altogether about four and a half lakhs of people attended the Special.

65. Miscellaneous activities.—Publicity activities of railways were also evident in many other directions. Calendars, pictorial labels in connection with certain trains, adhesive coloured stamps, printed slogans, and illuminated menu cards were some of the means resorted to by railways in creating goodwill and travel-mindedness among the public. A well-got-up and interesting Bengali publication " Banglay Bhraman " in two volumes descriptive of all tourist, historical and pilgrim centres in Bengal, was produced by the Eastern Bengal Railway for sale among the public. In order to combat the beggar and hawker nuisance in Bombay suburban trains, specially designed letter-press *cum* pictorial posters were produced by the Great Indian Peninsula Railway for exhibition in their carriages. In connection with the new air-conditioned service inaugurated this year on the North Western Railway, a special train with two of these coaches was run between Lahore and Amritsar and back to which the Press were invited. Many special write-ups on these coaches appeared in newspapers and periodicals. Time sheets showing the current timings of the Frontier Mail, neatly printed on cream cards, were displayed by the Bombay, Baroda and Central India Railway in their carriages. The distribution of the latest " News Bulletin " continued to be made to passengers travelling by this train and by the " Flying Ranee " Restaurant cars attached to principal trains on the Bombay, Baroda and Central India Railway are now named after famous tourist centres of interest and historic places such as Roses of Gulmarg, Pride of Peshawar, Vale of Kashmir, Citadel of Agra, Lakes of Udaipur, etc.

Dioramas, descriptive of travel to Shillong, and in connection with the Ganga Sagar and Nawabdip Melas,
way in the show windows of the
situated in the East Indian Railway buildings. Other dioramas, belonging to the East Indian Railway, were also erected in connection with the Magh Mela at Allahabad, Buddhist places of pilgrimage in India, Kashmir, and Benares Show models of Kamakhya Temple, the Satgambaz Masjid of Bagerhat and Darjeeling, were lent by the Eastern Bengal Railway for permanent display at the Government Industrial Museum.

Railways participated in 23 exhibitions, in which stalls were opened for the distribution of travel literature. In some instances an enquiry office was also opened, where information with regard to trains, etc., was supplied.

With a view to inculcating the " queue habit " in the Public, posters were supplied by the Central Publicity Bureau and exhibited at stations A short film on the subject with a running commentary in Hindustani was also exhibited by arrangement with selected theatres in Bombay, Nagpur, Jubbulpore, Calcutta, Lahore, etc Advantage was taken at principal fairs, *melas*, exhibitions and important stations to announce the scheme to the public from loudspeakers and by other means The All-India Radio arranged a special talk on " queue habit " during the year, and the Director of Education, Punjab, has been approached with the suggestion of making it the subject of special lessons in all educational institutions in the Punjab

Railways also contributed to war activities by accepting generous supplies of pictorial and letter-press posters, photographs, and other war publicity material for free display at their stations and city booking offices, and also by donating free space in newspapers for announcements in connection with the war and charities on behalf of war victims.

CHAPTER VI.

RAILWAY COLLIERIES.

66. The output from the principal Railway Collieries during the year 1940-41 compares with the previous year's output as follows:—

Colliery.	Owned by	Output.	
		1939-40.	**1940-41.**
		Tons.	Tons.
1. Bhurkunda	State Railways . .	105,429	**114,164**
2. Kargali	Do. . . .	702,912	**631,173**
3. Kurharbaree and Serampore .	Do. . . .	677,992	**664,846**
4. Joint Bokaro	E. I. & B. N. Railways .	1,052,436	**1,004,534**
5. Joint Sawang	Do. do. .	48,641	**50,806**
6. Jarangdih	B., B. & C. I. and M. & S. M. Railways.	79,082	**83,913**
7. Talcher	M. & S. M. Railway .	200,101	**206,518**
8. Kurasia	B. B. & C. I. Railway .	282,162	**280,451**
9. Deulbera	B. N. Railway . .	127,426	**132,487**
10. Argada	Do. . . .	318,981	**306,113**

67. State Railway Collieries.

67.1. Bhurkunda Colliery.—In No. 1 Kurse incline spontaneous heating of the goaf was observed on the east side during April; thick stoppings were built to prevent further entry of air into the goaf and the work of extracting coal which was stopped in August 1937 was resumed in July 1940. Indications of heating in No. 2 Kurse incline were observed in May 1940; stoppings were built to isolate the goaf and the extraction of coal continued. Nos. 1 and 2 Nakari inclines have been sufficiently developed to enable the output from them to be rapidly expanded when required but owing to the limited output demanded, workings were stopped for the greater part of the year. The workings in Simana and Sirka seams were also stopped due to restricted demand.

67.2. Kargali Colliery.—*Quarry workings.*—The main broad gauge track in No. 1 quarry was twice extended in a southerly direction to the dip of the seam and No. 2 overburden bridge was dismantled and shortened by recovering the two northernmost coal pillars. There were no traces of fire on the overburden spoil heaps in this quarry throughout the year and although the old fires have now spent themselves entirely, safe isolation from the old fire areas is still being maintained. In No. 2 quarry, the face of the overburden on the Karo barrier has been advanced and is now almost in line with No. 2 quarry overburden face. No. 3 quarry face at the east end of the quarry has advanced up to the spoil heap. A 3,300-volt overhead supply line was constructed round the east end, and westwards along the

north side of the quarry, and a transformer and new 75 h.p. haulage engine installed. In No. 4 quarry the surface rights of an area lying east of No 3 quarry have been acquired during the year and the work of overburden stripping on a small section of this area south of the dyke commenced.

Underground workings.—There was a shortage of skilled miners for the shaft workings throughout the year In the west dip section efforts were made to complete the development and miners have been supplied fairly regularly on day shifts. An air compressor over No 19 dip at No 4 level was constructed and in the Karo incline top section workings at No. 2 quarry, the Karo shaft was completed through heavily watered strata by sinking the remaining portion of the shaft upwards through the coal A 60 h.p turbo pump was installed in the pump shaft In the 12 ft. seam incline No. 8 west level was driven through the fault and the coal proved on the western side.

67.3. Kurharbaree Colliery.—Depillaring work in all the mines was carried on throughout the year. In the main dip gallery at No. 4 side Kalimoran pit reached the southern boundary and development work has since proceeded in the areas to the east and west of it. In the Joktiabad mine working under the Kamaljore river sand stowing is necessary and in order to carry out this work a borehole has been put down from the surface for the conveyance of stowing material. The construction of a surface haulage, an underground pipe line and other works in connection therewith neared completion In the Jubilee pit in No. 3 side the development of the north side was completed and pillar cutting operations commenced. The Bhadua mine was re-opened in the latter part of the year and development steadily maintained

67.4. Serampore Colliery.—In the Central pit in No 3 side new roads over the top of the collapsed roof area were made to extract the good pillars of coal on the inbye side. The work was of a very difficult nature but was carried out safely. Depillaring work in all other districts was carried out satisfactorily.

Some preliminary work has been done at Hetla pit after being submerged for over 30 years in order to prove the amount of coal available in this area; that so far uncovered has proved to be of first class quality. Two inclines have been driven and joined up and a third, for haulage purposes, is contemplated.

The outturn from the Coke and Bye-Products Plant was :—

	1939-40.	1940-41
Coke	29,215 tons	**27,851 tons.**
Coal Tar	1,251 ,,	**974 ,,**
Sulphate of Ammonia	315 ,,	**268 ,,**
Benzol	44,163 gallons.	**41,512 gallons.**
Rect. Solvent Naptha	1,390 ,,	**640 ,,**

67.5. East Indian and Bengal Nagpur Railways' Joint Bokaro Colliery.—Workings in coal and overburden at No. 1 quarry progressed normally throughout the year and a gallery was driven to locate the exact position of the major fault on the north side. In No 1 quarry extension development work advanced rapidly. The main coal haulage rope was extended along a new haulage plane parallel with the river barrier on the floor of this quarry and all coal is now hauled by this haulage. In No. 3 quarry the coal haulage was extended along the floor of the quarries to the eastern extremity.

67.6. East Indian and Bengal Nagpur Railways' Joint Sawang Colliery.—Coal was mined from both quarry and inclines. In view of No. 14 level mine being a gassy one a main haulage road was made. An additional air crossing was made over the main haulage road at No. 14 level

68. Company-managed Railway Collieries.

68.1. Bombay, Baroda and Central India and Madras and Southern Mahratta Railways' Jarangdih Colliery.—Shaft workings remained closed throughout the year. The water level in the shaft is now 57 feet from the surface.

There has been no further development to the dip of No. 3 incline but steady progress has been made on the south section of the incline, the workings of which were connected with the north workings of No. 5 incline at No. 18 south. In No. 5 incline the drivage of No. 28 north, 18/19 dip and 29 north has been speeded up to form an adequate standage for the 48 h.p. pump. No. 2 west slant and its companion No. 2 barrier slant have been started. No. 19 dip has been restarted from No. 30 north.

68.2. Madras and Southern Mahratta Railways' Talcher Colliery.—There was a progress of 40,151 feet made in gallery drivage while the regrading of south-east section main roadway, in order to open the area beyond the 35 feet upthrow fault, was carried out during the year.

Exploratory work was commenced by means of pilot galleries and underground boreholes from No. 1 west panel main and No. 5 north-west panel companion to prove the seam beyond the faults cutting off these districts. A gallery was driven in the top seam southwards from No. 21 road and No. 3 east panel through the fault, which throws the top seam practically opposite the main seam, with the object of finding out the nature of the measures in the southernmost strip of the property.

10 blocks of labour quarters, 6 blocks of artisan's quarters, 3 blocks of junior staff quarters and an isolation hospital were constructed during the year.

68.3. Bombay, Baroda and Central India Railways' Kurasia Colliery.—Development works were carried out satisfactorily and a progress of 315 feet in No. 2 incline and 501 feet in No. 3 incline was made during the year.

69. Staff welfare.—The general health of the staff and sanitation in the State and Company-managed Railway collieries were good.

70. Coal mined in India.—In 1940 the coal mined in the various provinces of British India amounted to 26,130,778 tons as against 24,662,788 tons in 1939 or an increase of 1,467,990 tons.

71. Coal despatched by rail.—The quantity of coal carried by the East Indian and Bengal Nagpur Railways was :—

	1939-40.	1940-41.
	Tons.	Tons.
East Indian Railway	15,403,708	**15,407,841**
Bengal Nagpur Railway	9,741,700	**9,913,040**

72. Coal shipped from Calcutta.—Shipments, including bunker coal from the port of Calcutta to Indian and foreign ports during 1940-41, amounted to 2,342,385 tons as compared with 3,217,509 tons in 1939-40. 176,127 tons of Indian coal were shipped to the Ceylon Government Railway.

73. Tonnage of coal inspected.—The State Railways' coal department inspected 8,120,639 tons coal during 1940-41 as compared with 7,894,539 tons in 1939-40.

74. Indian Coal Grading Board.—The department continued to carry out the work on behalf of the Indian Coal Grading Board during the year. The amount of cargo coal shipped under the Indian Coal Grading Board to various ports during 1940 was 2,259,696 tons and inspections were carried out by this department both at the collieries and Kidderpore Docks.

CHAPTER VII.

ROLLING STOCK AND MATERIALS.

75. **Additions to equipment.**—During the year the following locomotives and rolling-stock, including arrears brought forward from previous years, were on order for broad and metre gauge railways :—

Items	Broad gauge	Metre gauge.
Locomotives	94	24
Coaching stock	871	409
Goods stock	2,159	915

New locomotives and rolling-stock actually placed on the line during the year were :—

Items	Broad gauge	Metre gauge
Locomotives	9	10
Coaching stock	383	226
Goods stock	1,790	298

The numbers of coaching and goods stock shown are in terms of four-wheelers, a bogie being reckoned as two four-wheelers These figures do not, however, represent the actual net additions to rolling-stock as they also include vehicles built in replacement of stock which had reached the end of its economic life.

75.1. **Engines.**—19 broad gauge locomotives were scrapped during the year of which 9 were replaced, so that the number on 31st March was 10 less than at the beginning of the year On the metre gauge 1 locomotive was scrapped and 10 were added. The average tractive effort per engine rose from 26,093 lbs. in 1939-40 to 26,110 lbs. in 1940-41 on the broad gauge and from 14,962 lbs in 1939-40 to 14,991 lbs in 1940-41 on the metre gauge

75.2. **Coaching vehicles.**—At the end of the year, the number of coaching vehicles on the broad gauge was 205 more than at the beginning, against a total of 383 units placed on the line during the year 178 were on the replacement account. On the metre gauge, the number at the end of the year was less by 71, 297 were scrapped of which only 226 were replaced

75.3. **Wagons.**—On the broad gauge 792 were scrapped during the year against an addition of 1,790. On the metre gauge 548 new units were placed on the line out of which 250 were replacements and 298 were new additions

76. **Reduction of upper class accommodation.**—Railways continued to examine the possibility of further reductions in upper class accommodation

On the Eastern Bengal Railway, 1 broad gauge bogie I class and 3 metre gauge bogies I, II and Inter class carriages were converted into I, II, Inter and III class to provide more accommodation for Inter and III class passengers

The first class accommodation provided by railways was reduced by 283 seats in 1940-41.

77. **Construction of locomotives at Ajmer.**—Locomotive construction was first undertaken in the Metre Gauge Central Shops in 1896 and since that date 434 locomotives of various types have been built and put into service In April 1938, these workshops undertook the construction of locomotives for other Indian Railways and during the year 1940-41 work was carried out on an order for 9 'YB' class locomotives for the Assam Bengal Railway in addition to completing 4 'A' class 4-4-4 type tank locomotives for the Bombay, Baroda and Central India Railway metre gauge system

Orders were also received for 2 ' YB ' class locomotives for the Bengal and North-Western Railway and for 10 ' XT1 ' class locomotives (broad gauge) for the North Western Railway, progress on which was delayed due to the difficulty of obtaining the required material.

78. Supply of rails and fishplates from indigenous sources.—During the year under review orders amounting to 87,548 tons of rails and fishplates were placed with Messrs. The Tata Iron & Steel Co., Ltd.

79. Purchase of timber for carriage and wagon building.—The total value of timber other than sleepers bought by Class I railways (excluding Jodhpur, Mysore and His Exalted Highness the Nizam's State Railways) during the year was 41·37 lakhs as compared with 39·04 lakhs in 1939-40 and 46·83 lakhs in 1938-39.

The kilns at Lilloah remained closed throughout the year.

80. Wooden Sleeper Purchase Organization.—The total purchase of wooden sleepers during the last four years has been :—

(Number of sleepers in lakhs.)

	1937-38.	1938-39.	1939-40.	1940-41.
Broad gauge .	12·59	13·64	13·37	14·88
Metre gauge .	14·28	15·23	14·15	15·46
Narrow gauge .	1·61	1·95	2·21	2·19

The relative position of various kinds of sleepers can be seen from the following percentages, based on the total number of sleepers in the track of Class I railways (excluding Mysore State Railway) :—

1940-41.

	Wood.	Cast Iron.	Steel.	Other kinds.
Broad gauge .	40·5	42·1	17·2	0·2
Metre gauge .	70·3	5·1	24·5	0·1

The wooden sleeper track mileage of all gauges on Class I railways (excluding Mysore State Railway) on 31st March 1941 was 26,744 out of a grand total of 49,946.

No wooden sleepers were imported except from Burma. The price of Sal sleepers in Eastern Group in 1939-40 averaged about Rs. 5-7-10 for broad gauge and Rs. 2-8-0 for metre gauge as compared with Rs. 5-4-9 and Rs. 2-5-4 respectively in 1939-40.

At Dhilwan on the North-Western Railway the following soft wood broad gauge sleepers and narrow gauge sleepers of coniferous trees were impregnated with a mixture of 40 per cent. creosote and 60 per cent. of fuel oil :—

—		Fir.	Chir.			Kail.	Deodar.	Total.
			Dept. (Rly).	Irrigation Dept.	12' long for Military Dept.			
No. of sleepers treated.	Broad gauge.	46,731	304,128	8,736	1,200	14,605	2,62,539	6,37,939
	Narrow gauge.	—	—	—	—	—	852	852
Average absorption per broad gauge sleeper of 40% creosote mix.		6·16	6·00	5·68	8·08	6·16	4.08 1·60 N.G.	
Average absorption per broad gauge sleeper of 60% Fuel oil mix.		9·24	9·00	8·52	12·12	9·24	6·12 2·39 N.G.	
Average total absorption for broad gauge sleeper.		15·4	15·00	14·2	20·2	15·4	10·2 3·99 N. G.	
Approximate average absorption per c.ft.		4·92	4·80	4·54	4·84	4·92	3·26 3·64 N. G.	

The cost of treated sleepers for the year 1940-41 was as follows:—

	Average cost per sleeper untreated	Cost of treating per sleeper including freight to Jhilwan	Overhead and other charges, etc.	Total average cost per treated broad gauge sleeper	Remarks.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Deodar . . { Broad gauge .	4 9 0	0 11 6	0 2 6	5 7 0	
Deodar . . { Narrow gauge	1 7 0	0 4 3	0 1 0	1 12 3	
Kail . . Broad gauge .	3 13 0	0 14 11	0 2 7	4 14 6	
Chir . . Broad gauge .	3 5 0	1 5 7	0 2 7	4 13 2	
Fir . . Broad gauge	2 11 6	0 12 1	0 2 6	3 10 1	
Chir broad gauge for irrigation department.	..	1 1 0	0 5 6	1 6 6	Treating charges only
„ 12' long sleeper for Military Department.	3 13 0	2 3 1	0 3 1	6 3 2	

The total amount spent on wooden sleepers on Class I railways (excluding His Exalted Highness the Nizam's State, Jodhpur and Mysore State Railways) was Rs 1·16 crores in 1940-41 as compared with Rs. 1·20 crores in 1939-40 and Rs. 1·02 crores in 1938-39

81. Value of Railway materials purchased.—The value of stores purchased by Class I railways (excluding the Jodhpur, Mysore and His Exalted Highness the Nizam's State Railways which are mainly or wholly the property of Indian States) increased from Rs 17·67 crores in 1939-40 to Rs. 17·89 crores in 1940-41 The value of "indigenous materials" purchased rose by Rs. 1,01 lakhs while that of "imported materials" declined by Rs. 79 lakhs By classes of stores, increases occurred under permanent-way material and track tools (9 lakhs), hardware stores, copper, tin, zinc ware, etc (39 lakhs) and miscellaneous stores (50 lakhs), whereas under rolling-stock and bridge work there were decreases of 66 and 13 lakhs respectively.

NOTE —Detailed figures of value of stores purchased by individual railways are given in Appendix A of Volume II of this report.

Particulars.	Value of imported materials (in lakhs)			Value of indigenous materials (in lakhs)	Total purchases (in lakhs)	
	Purchased direct	Purchased through agents in India	Total imported materials		1940-41.	1939-40.
	Rs.	Rs	Rs.	Rs	Rs	Rs
A. Bridge work and its parts, fittings and special fastenings.	.	1	1	2	3	16
B. Engineering plant and components including all hand and power machinery		5	5	2	7	7
C. Workshop machinery, plant and equipment including pneumatic machinery and tools.	2	17	19	2	21	27
D Permanent way material and track tools.	1	3	4	3,41	3,45	3,36
E. Rolling-stock . . .	51	1,33	1,84	1,39	3,23	3,89
F Building materials, water mains, sewage system and track and yard enclosing materials and signal and interlocking materials, etc	3	12	15	38	53	53
G. Stores hardware, copper, tin and zinc ware, all leather, canvas and India rubber in bulk, metals, painters' stores, timber and fuel and fuel oil, etc.	13	1,37	1,50	4,93	6,43	6,13
H. Electrical and train and locomotive lighting plants and materials, etc., and telegraph and telephone equipment.	7	54	61	12	73	64
All other stores . . .	3	1,22	1,25	1,90	3,15	2,62
Total .	63	4,94	5,64	12,25	17,89	17,67

82. Increased in-take of indigenous goods.—The comparative figures for the years 1939-40 and 1940-41 are given below: these include purchases made through the Indian Stores Department and by the Railway Board.

Railways.	Year.	Total value of purchases (in lakhs).				Percentage of Column 5 to Column 6.
		Stores imported direct.	Imported stores purchased in India.	Stores of Indian manufacture or of indigenous origin.	Total.	
1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	
State-managed .	1939-40	1·83	3,43·57	6,81·30	10,26·75	66·4
	1940-41	3·94	3,12·20	7,47·96	10,64·10	70·3
Company-managed .	1939-40	1,37·34	1,59·96	4,42·80	7,40·10	59·8
	1940-41	76·46	1,71·77	4,76·88	7,25·11	65·8
Total .	1939-40	1,39·22	5,03·53	11,24·10	17,66·85	63·6
	1940-41	80·40	4,83·97	12,24·84	17,89·21	68·5

Compared with 1939-40, the position is :—

(In lakhs.)

Items.	State-managed Railways.	Company-managed Railways.	Total.
	Rs.	Rs.	Rs.
A. Stores imported direct .	+2·06	-60·88	-58·82
B. Imported stores purchased in India . .	-31·37	+11·81	-19·56
C. Stores of indigenous origin . . .	+66·66	+34·08	+1,00·74
Total .	+37·35	-14·99	+22·36

82.1. Value of stores purchased through the Indian Stores Department for State- and Company-managed Railways (Class I).—The comparative figures for the years 1939-40 and 1940-41 are :—

Railways.	Year.	Total value of stores purchased (lakhs).	Value of stores purchased through the Indian Stores Department.	
			Amount (lakhs).	Percentage of the total value of stores purchased.
		Rs.	Rs.	
State-managed . . .	1939-40	10,26·75	4,69·32	45·72
	1940-41	10,64·10	4,58·19	43·06
Company-managed . .	1939-40	7,40·10	28·68	3·87
	1940-41	7,25·11	10·14	1·39
TOTAL .	1939-40	17,66·85	4,98·00	28·19
	1940-41	17,89·21	4,68·33	26·18

In addition the Indian Stores Department purchased on behalf of the Chief Mining Engineer (Railway Board), the Central Publicity Officer and the Railway Clearing Accounts Office stores valued at Rs. 6 26 lakhs during 1940-41 as against Rs 7 69 lakhs during 1939-40.

Reduced purchases of machinery, hardware and miscellaneous stores were mainly responsible for the decline in the value of stores purchased through the Indian Stores Department

82.2. Value of stores purchases controlled by the Railway Board.—As in previous years, the Railway Board purchased rails, sleepers (steel, cast iron and wood), wagons and underframes both for the State and Company-managed Railways and fuel and fuel oil for State-managed Railways Compared with 1939-40, the position is :—

Railways	Year	Total value of stores purchased (lakhs)	Value of stores purchases controlled by the Railway Board	
			Amount (lakhs)	Percentage of the total value of stores purchased
		Rs	Rs	
State managed	1939 40	10,26 75	3,90 79	38 07
	1940-41	**10,64 10**	**3,73 12**	**35 06**
Company managed	1939 40	7,40 10	1,71 35	23 15
	1940-41	**7,25 11**	**1,60 03**	**22 07**
TOTAL	1939 40	17,66 85	5 62 14	31 83
	1940-41	**17,89 21**	**5,33 18**	**29 80**

The decline in the value of purchases is primarily due to reduced wagon building and coaching underframe programmes, orders for wooden sleepers were also on a smaller scale

82.3. Direct purchases by Railways.—The value of direct purchases made by railways during 1940-41 amounted to about Rs 788 lakhs compared with Rs 707 lakhs for 1939-40. Metals, painters' stores, timber and locomotive fittings were the main items contributing to the increase, but there was an appreciable increase also in the purchases of miscellaneous stores of all kinds

83. Stores Balances.—The statement below compares the total stores balances at the end of 1940 41 with those at the end of 1939-40

(Lakhs of rupees)

Years	A B	B N	B, B & C I	E B	E I	G I P	M & S M	N W.		S I	Other railways	Total.
								Commercial	Strategic			
1939 40	38	1,31	90	73	1,86	1,25	51	2,63	37	69	56	11,24
1940-41	**40**	**1,57**	**93**	**95**	**2,27**	**1,40**	**53**	**2,65**	**35**	**79**	**62**	**12,49**

84. Air-conditioned coaches.—Seven air-conditioned coaches for the use of first class passengers were built in the shops of the North Western Railway and placed in regular service from May 1940 on the Peshawar-Bombay, Lahore-Karachi and Lahore-Kalka services of the North Western Railway. At the same time the Bombay, Baroda and Central India Railway completed an additional four thus bringing their total stock of air-conditioned coaches up to 10; these additional coaches also commenced operating from May 1940 and augmented the service on the Bombay-Peshawar route

From 1st June 1940 a tri-weekly air-conditioned service between Bombay and Howrah superseded that previously run daily and the stock so freed was utilised to inaugurate a tri-weekly service between Howrah and Delhi.

85. Cost of maintenance of locomotives, carriages and wagons and their operation on Class I Railways.—The total expenditure including the cost of fuel amounted to :—

	1939-40. Rs. (Crores).	1940-41. Rs. (Crores).	Percentage increase.
Broad gauge	16·64	17·44	4·81
Metre gauge	4·86	4·91	1·03

The increase of Rs. 80 lakhs on the broad gauge has been chiefly under fuel, which has increased by about Rs. 57 lakhs due to the cost of coal per ton including freight having risen sharply as compared with 1939-40 on all railways except the East Indian and South Indian. Other minor increases occur under locomotive operating expenses Rs. 7 lakhs, locomotive shop repairs Rs. 10 lakhs and carriage shop repairs Rs. 5 lakhs. An increase of Rs. 5 lakhs occurs on the metre gauge of which approximately Rs. 4 lakhs is accounted for by locomotive operating expenses.

The figures of gross ton miles are :—

	1939-40. (Millions).	1940-41. (Millions).	Percentage increase.
Broad gauge	75,245	79,271	5·36
Metre gauge	15,775	15,887	0·71

86. Central Standards Office for Railways.

86.1. Civil Engineering Branch.—During the year under review, some of the important designs issued by the Civil Engineering Branch are mentioned below :—

Bridges—

Reinforced concrete slab tops (twin slab type) for broad gauge for M. L. standard of loading.

Track—

Drawings for turnouts for 3 ft. 6 ins., metre and standard gauges required in connection with the war.

86.2. Civil Engineering Publications.—During the year under review, a revised edition of the Indian Railway Standard Code of Practice for the design of Bridge Piers and Abutments was issued.

87. Mechanical Engineering Branch.

87.1. Mechanical Drawing Office.—Modifications to I. R. S. wagon parts, underframes, automatic vacuum brake and coaching body fittings recommended by the Carriage and Wagon and Electrical Standards Committees and others were incorporated in the master sets of drawings maintained.

During the year under review, approximately 116 new wagon, underframe, and carriage and wagon part drawings were prepared and issued.

Drawings relating to the conversion of 'XG' type locomotives to 2-8-2 type were prepared for the North-Western Railway administration.

Standard drawings for lower class and brake luggage and third class vehicles incorporating improved accommodation and amenities for lower class passengers on a scale laid down by the Railway Board, were prepared for examination and criticism by the Carriage and Wagon Standards Committee at their March 1941 meeting. Further improvements suggested by the Committee at this meeting are being shown in the drawings before issue to railways. The fact that these drawings are available will be of great assistance when railway workshops undertake building programmes on a large scale.

Trouble has been experienced in the past with metre gauge goods brake vans, the underframes of which have proved to be weak. The Central Standards Office were able to place before the Carriage and Wagon Standards Committee a preliminary arrangement of a new design and this was accepted for future builds as stronger and generally improved.

Towards the end of the period under review layouts were prepared for both broad and metre gauge ambulance trains. These trains are to be constructed in Railway Workshops for the Defence Department.

88. Specification Branch.

88.1. Specifications.—During the year under review new Indian Railway Standard Specifications for the following items were issued :—

(i) Double wire signalling ropes, 6 x 19 provisional
(ii) Pressure gauge, steam and hydraulic.
(iii) Springs, upholstery.
(iv) Bristle, hair, fibre and cane brushes (other than painters' brushes)
(v) Steel wire brushes.

Furthermore 16 I R.S. specifications were revised and re-issued while 17 were modified.

Twelve new and as many revised I.S.D specifications and two B.S. specifications were adopted for use on Railways

As an emergency war measure and with a view to encouraging indigenous manufacture, certain provisions in some of the I R.S specifications were relaxed. In a few cases the purchase of materials to American specifications has been permitted

To assist railways in obtaining material required in the present emergency, comparative statements of American equivalents of I R.S. specifications for items of steel, copper and brass, etc , affecting 37 I R S specifications and 41 American specifications were prepared and circulated to railways and the Controller of Steel Supplies. These statements are kept up-to-date and revised when revisions are issued to American specifications

89. Standardization Committees.

89.1. Bridge Standards Committee.—The Committee met in December 1940 It considered the drafts of the Steel Bridge Code and the Arch Bridge Code prepared by the Central Standards Office Revision of certain clauses of the Pier and Abutment Code, the Bridge Rules and the Steel Structures Code was recommended. The Committee further outlined the features that should be incorporated in the future standard designs of turntables

89.2. Track Standards Committee.—The Committee met in November 1940 It laid down the lines on which the designs of steel beaters and claw bars could be improved, considered the standardization of C S T. 9 cast iron sleepers and suggested modifications to the existing design of spring crossings It further recommended that railways should carry out trials with fishing fit nose blocks and with faced wing rails in order to determine their effects in increasing the life of a crossing.

89.3. Signalling and Interlocking Standards Committee.—The Committee met in January 1941 when besides suggesting modifications to certain signal fittings it took a complete stock of the existing standard signal fittings with a view to increase their usability by Indian railways It further recommended a general policy which will facilitate the subsequent standardization of double wire signal fittings. Revision of certain parts of the Signal Manual was also completed.

89.4. Locomotive Standards Committee.—The Locomotive Standards Committee met twice during the period under review The first meeting, held in December 1940, dealt with points which have arisen during the previous twelve months on the different features of I.R.S. locomotive and tender design An important step forward in standardization was taken at this meeting when the Committee made recommendations (which the Board approved) for the cancellation of many alternatives to I R.S. loco. fittings and components which have been introduced in previous years Although the agenda included fundamental subjects such as the design of tube plates to give maximum thermodynamical efficiency, the staying of large fireboxes, design of intermediate draw gear, etc., it was possible to place before the Committee several

An investigation has been made of unusual lateral wear of rails on the Samasata-Bhatinda section, North Western Railway. Modifications to the lateral controls of the locomotives running on this section have been recommended and it is believed that the trouble has been cured.

(b) *Duplex joint sleepers.*—These sleepers continue to give satisfactory results on several railways.

(c) *Guard rails for level crossings*—As designed the guard rail consisting of a rolled steel flat has no direct support and depends for this entirely on the bolt. To remedy this defect which caused the bolts to bend, the distance block has been redesigned to have a shoulder to support the guard rail Trials with redesigned block are going to be carried out

(d) *Rail expansion joints*—The trials with these joints are continuing.

(e) *Heat-treated fishplates*—The [illegible] Indian Railway have been [illegible] *i.e.*, new 90 lb rails on [illegible] long time before any conclusive results about the value of heat-treatment will be obtainable in these conditions To obtain quicker results, it has been decided to carry out trials of heat-treated fishplates on sections where the track is weak or hogged rails are prevalent.

(f) *Staggered rail joints*—Sufficient experience has not yet been gained to enable definite conclusions to be arrived at. The experiments on the North Western Railway are continuing.

(g) *Spring crossings*—Some minor modifications have been made to the design and the East Indian and Eastern Bengal Railways are going to try out the modified designs.

(h) *Improvements to track on Bridges.*—Rubber pads under rails on all steel track continue to give satisfactory service Plastex pads cast *in situ* have been found to be unsuitable as they deteriorate rapidly.

(i) *Welded rail joints.*—In addition to the trials of thermit welded rail joints on the N[illegible] Peninsula Railways [illegible] trials in sidings of [illegible] the heads of the r[illegible] welded at the top or bottom fishing planes or both to the web of the rail. If the strength of these joints is found to be adequate, they will be tried in the main line carrying traffic at speeds up to 40 miles per hour.

(j) *Corrosion tests on different kinds of steel*—The tests are being continued. It has been decided that half the number of test plates should be exposed for 3 years before the loss of weight due to corrosion is determined. In the case of the remaining half the loss of weight due to corrosion will be determined annually as hitherto.

(k) (i) *Experiments with metal sprayed plates and with plates coated with cement wash,*

(ii) *Experiment with "limit spanner" for prevention of creep*
There is at present nothing further to report on these trials.

(l) *Reversed jaw C.S.T. 9 sleepers*—These sleepers have been designed to make the removal (by inexpert wreckers) of a rail from track laid with a mixture of these and ordinary C.S.T. 9 sleepers, a difficult matter. The reports received so far indicate that this object is likely to be achieved.

90.2. Mechanical Research Branch.—The Mechanical Branch of the Central Standards Office Research Organization began to function on the 1st January 1941 and was therefore in existence for three months only of the period covered by this report. From its inception the Mechanical Research Branch has taken over from the Great Indian Peninsula Railway the control of the Dynamometer Car. Dynamometer Car trials on a modernised B. E. S. A. 4-6-0 type locomotive were started early in January 1941 and were still in progress at the end of the period under review. It was considered prudent that during the early stages of development of the Research Branch the scope in the Mechanical Engineering field should be restricted to the investigation of urgent problems facing the two largest state railways (North Western Railway and East Indian Railway). The officer-in-charge of the Mechanical Research Branch took the earliest opportunity to ascertain by discussion with the Chief Mechanical Engineers of these two railways and with other officers responsible for the maintenance of mechanical equipment, the problems most urgently needing investigation, and a programme of research was drawn up. The items in the programme fall into three main categories—

1. Researches directed towards saving in fuel,
2. Researches directed towards saving in the cost of maintenance of locomotives incurred in Mechanical Workshops,
3. Researches directed towards saving in the cost of maintenance of locomotives incurred in Transportation Workshops.

Researches into problems of rolling-stock design were deferred for consideration after the war.

Researches in category 1 include the complete testing of locomotives and the investigation of problems of degree of superheat, steam pressure drop, valve gear and front end design. They generally require the use of the Dynamometer Car and form a long-term programme the benefit of which can be realised only after a considerable lapse of time.

Researches in category 2 have two principal aims :—

(1) Discovery on locomotives undergoing overhaul in Mechanical Workshops of those factors which increase the time out of service and enhance the cost of repairs,

(2) Provision of remedies by developing where necessary suitable changes in design, material or practice.

Researches in category 3 have similar aims to those in category 2 but are specially directed towards items responsible for maintenance expenditure and reduced availability of locomotives in service.

Maintenance and availability problems particularly those in category 3 form the short-term programme of research, the benefits of effective solutions being capable of realisation in a short space of time.

The first stage in any research is the collection of data and in the short time during the period under review that the Mechanical Research Branch was at work it was not to be expected that progress beyond this stage could be made. The Mechanical Research Officer was however on tour frequently during the period visiting workshops and running shed and good progress with the collection of data particularly in respect of researches in category 3 can be recorded.

90.3. Oscillation trials of X class Pacific type engines.—The results of the trials made during 1939-40 were considered by members of the Pacific Locomotive Committee. The Committee noted that the flange pressures exerted by the bogie wheels were higher than had been expected and they recommended that comparative tests should be made with engines fitted with centre bearer bogies and other fitted with side bearer bogies. They recommended that the comparison should be made in the case of both XB and XC engines, the selected engines being tried on East Indian, Great Indian Peninsula, Bombay, Baroda and Central India and Madras and Southern

Mahratta Railways. These tests were made and the results were telegraphed to the Consulting Engineers for the information of the Committee. The flange forces recorded in these trials, even with the side bearer bogie were in certain cases higher than was considered to be desirable. Meanwhile, designs were prepared by the Mechanical Branch for an improved type of centre bearer bogie slide and also for a device for providing a lateral spring control to the hind truck axle of X class pacifics.

These new details have been applied to an XB and an XC engine on which flange force and oscillation trials have been made A substantial reduction in flange pressures has been noted under a wide range of track conditions The experiments are still in progress. A limited number of flange force and oscillation trials of B E S A. 4-6-0 locomotives have been made contemporaneously with the X class pacific trials and over the same test sites to provide a basis of comparison

90.4. Oscillation trials of metre gauge locomotives and rolling stock.—Oscillation and flange force trials were made on YB class pacific and YF class 0-6-2 and 2-6-2 class engines on the Assam Bengal Railway.

In the case of the YB class a comparison was obtained between the behaviour of an engine in the condition as originally designed with that of an engine modified on the lines proposed by the Pacific Locomotive Committee for X class pacifics.

The modified engine gave improved results

In the case of the YF class comparisons were made between different types of front and rear control including the leading truck both with normal and increased lateral control, the substitution of flat fabric liners for Cartazzi hind truck slides, the provision of German type inter buffing gear and the substitution of corrugated journals for ordinary coupled wheel journals

The results indicated what relaxation in existing speed restrictions might be made after the various modifications had been made singly and in certain combinations.

The results of all the YB trials have been furnished to metre gauge railways.

A series of flange force tests of metre gauge wagons was made on the Assam Bengal Railway to study the effect of corrugated axle journals when fitted to these vehicles.

90.5. Specifications Branch.—(a) *Paints.*—The condition of paint panels exposed at various places is being recorded at regular intervals by systematic methods. Valuable data regarding the protective properties of various paints under the widely varying climatic condition in India are being obtained It is expected that final conclusions will be reached by the end of next year and this will complete the work for some years to come.

(b) *Corrosion tests* —Panel plates of eight types of steel (as mentioned in the 1937-38 Report) were kept under observation and inspected at regular intervals Their condition was systematically recorded and these were derusted and weighed at the Government Test House, Calcutta It will be possible to give a conclusive report on this research in a few years time

CHAPTER VIII.

STAFF.

91. Number of staff.—The total number of employees (permanent and temporary) on all Indian Railways and in the office of the Railway Board and other offices subordinate thereto (excluding staff employed on construction) at the end of the year 1940-41 was 730,436 as compared with 709,022 at the end of 1939-40. The total route mileage at the end of the year was 41,052. The following table shows the number of employees by communities on the 31st March 1940 and 1941. A similar statement showing details by railways is given as Appendix C-I of Volume II of this Report.

Date.	Europeans.	Indians.									Grand Total.
		Hindus.		Muslims.	Anglo-Indians and Domiciled Europeans.	Sikhs.	Indian Christians.	Parsis.	Other communities.	Total.	
		Hindus other than depressed classes.	Depressed classes.								
31st March 1940*	2,333	399,715	106,505	157,857	13,099	8,106	18,045	1,505	1,857	706,689	709,022
31st March 1941	2,153	415,347	107,118	161,577	13,336	8,520	18,993	1,531	1,861	728,283	730,436

NOTE.—These figures exclude staff on loan from the Indian Audit and Accounts Service.
* Revised figures due to changes made by the railway administrations in the figures published last year.

92. Cost of staff.—The following statement shows the number and cost of all staff, gazetted and non-gazetted, permanent and temporary, open line and construction, employed on Class I Railways during the years 1939-40 and 1940-41. Contractors' labour is not included.

Railway System.	Year.	Number of staff on 31st March.							Cost of staff.			
		Open line.			Construction.			Gazetted Officers on loan from the Indian Audit and Accounts Service				
		Gazetted Officers.	Non-gazetted employees.	Total.	Gazetted Officers.	Non-gazetted employees.	Total.		Gazetted Officers.	Non-gazetted employees.	Total.	Total including staff on loan from the Indian Audit and Accounts Service.
1	2	3	4	5	6	7	8	9	10	11	12	13
									Rs.	Rs.	Rs.	Rs.
Assam Bengal	1940	60	16,396	16,456	..	..	..	..	10,05,818	69,80,497	79,86,315	79,86,315
	1941	61	16,906	16,967	..	..	..	..	9,83,061	72,99,591	82,82,652	82,82,652
Bengal and North-Western.	1940	71	28,179	28,250	2	841	843	..	11,08,186	76,01,458	87,09,644	87,09,644
	1941	68	28,367	28,435	1	373	374	..	11,30,859	79,80,761	91,11,620	91,11,620
Bengal Nagpur	1940	194	68,638	68,832	..	..	..	..	33,23,589	8,37,65,107	8,70,88,696	8,70,88,696
	1941	189	70,705	70,894	..	..	..	..	31,82,771	8,59,22,179	8,91,04,950	8,91,04,950
Bombay, Baroda and Central India.	1940	176	62,584	62,760	..	1	1	..	30,34,534	8,53,03,326	8,83,37,860	8,83,37,860
	1941	168	66,130	66,298	..	1	1	..	31,12,299	8,64,01,604	8,95,13,903	8,95,13,903

Railway System.	Year.	Number of staff on 31st March. — Open line — Gazetted Officers	Open line — Non-gazetted employees	Open line — Total	Construction — Gazetted Officers	Construction — Non-gazetted employees	Construction — Total	Gazetted Officers on loan from the Indian Audit and Accounts Service	Cost of staff. — Gazetted Officers	Non gazetted employees	Total	Total including staff on loan from the Indian Audit and Accounts Service
1	2	3	4	5	6	7	8	9	10	11	12	13
									Rs	Rs.	Rs	Rs
Eastern Bengal†	1940	121	52,842	52,963	.	.	.	2	22,66,229	2,52,50,135	2,75,16,364	2,75,72,813
	1941	123	55,617	55,740		..	.	1	21,02,204	2,55,96,068	2,76,98,272	2,77,51,460
East Indian‡	1940	277	133,293	133,570	.	46	46	5	50,90,265	6,13,20,399	6,64,10,684	6,65,08,159
	1941	252	134,536	134,788	..	378	378	5	48,60,351	6,29,38,867	6,77,99,218	6,78,98,009
Great Indian Peninsula	1940	209	78,608	78,817	..		..	1	43,05,159	4,38,04,745*	4,81,09,904*	4,82,13,927*
	1941	201	85,920	86,121		..	.		38,63,586	4,47,78,376	4,86,41,962	4,86,53,774
Jodhpur	1940	26	7,891	7,917	1	775	776	1	3,87,988	29,78,191	33,66,179	33,96,536
	1941	27	8,055	8,082	1	396	397	1	3,29,614	30,74,875	34,04,489	34 35,673
Madras and Southern Mahratta.	1940	136	46,526*	46,662*	.	.	..	..	23,99,574	2,32,22,746	2,56,22,320	2 56,22,320
	1941	134	47,239	47 373	..	..	.	..	23,85,914	2,34,54,887	2,58,40,801	2,58,40,801
Mysore State	1940	31	7,403	7,434	1	22	23	.	2,06,300	26,06,641	28,12,941	28,12,941
	1941	34	7,749	7,783		1	1	..	2,10,171	26,74,395	28,84,566	28,84,566
Nizam's State	1940	88	16,368	16,456	6	216	222	.	12,49,163	67,06,194	79,55,357	79,55,357
	1941	89	17,221	17,310	3	112	115	.	10,77,205	70,07,268	80,84,473	80,84,473
North Western	1940	268	102,814*	103,082*	4	1,197*	1,201*	5	46,19,648	5,84,64,063*	6,30,83,711*	6,31,79,766*
	1941	242	103,871	104,113	2	10	12	5	43,40,695	5,72,96,252	6,16,36,947	6,17,14,157
Rohilkund and Kumaon	1940	14	6,125	6,139			..	..	1,88,369	15,93,737	17,82,106	17,82,106
	1941	14	6,270	6,284	.	..		..	1,90,774	17,45,576	19,36,350	19,36,350
South Indian	1940	127	37,536	37,663		61	61	..	19,16,388	1,67,04,567	1,86,20,955	1,86,20,955
	1941	124	39,708	39,832		1	1		19,15,452	1,68,24,773	1,87,40,225	1,87,40,225
Railway Clearing Accounts Office	1940	4	1,403	1,407				2	53,357	15,58,467	16,11,824	16,49,160
	1941	5	1,490	1,495			..	1	53,237	15,14,585	15,67,822	16,96,272
TOTAL	1940	1,872	666,606*	668,408*	14	2,659*	2,673*	16	3,11,54,587	32,81,00,273*	35,90,54,860*	35,93,56,553*
	1941§	1,731	689,784	691,515	7	1,272	1,279	13	2,97,45,360	33,45,92,890	36,43,38,250	36,46,48,852

* Represents revised figures for 1939-40 due to changes made by the railway administrations in the figures published last year

† Figures for 1940-41 include staff taken over from Bengal Doars Railway, which was class II Railway

‡ Figures for 1940-41 include staff taken over from Central Publicity Office

§ Includes figures for Bengal Dooars Railway and Central Publicity Office

Distribution of cost of Gazetted Officers and Subordinate Staff of the Railway Clearing Accounts Office.

Railway.	Gazetted Officers.		Non-gazetted employees.		Total.		Total including staff on loan from Indian Audit and Accounts Service.	
	1939-40.	1940-41.	1939-40.	1940-41.	1939-40.	1940-41.	1939-40.	1940-41.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. North Western .	14,179	16,881	4,14,139	4,25,680	4,28,318	4,42,561	4,38,239	4,52,825
2. East Indian . .	14,179	16,881	4,14,139	4,25,680	4,28,318	4,42,561	4,38,239	4,52,826
3. Eastern Bengal .	5,317	6,331	1,55,302	1,59,630	1,60,619	1,65,961	1,64,340	1,69,810
4. Great Indian Peninsula.	10,634	12,661	3,10,604	3,19,260	3,21,238	3,31,921	3,28,679	3,39,619
5. Bombay, Baroda and Central India.	9,048	10,483	2,64,283	2,64,335	2,73,331	2,74,818	2,79,663	2,81,192
TOTAL .	53,357	63,237	15,58,467	15,94,585	16,11,824	16,57,822	16,49,160	16,93,272

A comparison of the figures for 1940-41 with those for the previous year shows that the total number of staff employed on the open lines of State and Company-managed Railways increased by 23,107 during the year, but the number of construction staff decreased by 1,394 while the number of staff on loan from the Indian Audit and Accounts Service decreased by 3.

The total cost of staff including that of staff on loan from the Indian Audit and Accounts Service increased by Rs. 52,62,327 during the year. Increases were recorded both in the numbers and cost of staff on all the Railways except the North Western Railway, on which there was a decrease in number as well as in cost. The increase in numbers on Railways was due to employment of additional staff to cope with the increased traffic. The dearness allowance and the extension of provident fund benefits to lower paid staff also contributed to the rise in cost.

A change in accounting procedure is responsible for the large increase in cost on the Bengal Nagpur Railway. On the Eastern Bengal Railway, the increase in the numbers as well as in cost was partly due to the absorption of the Bengal Dooars Railway by the former.

93. Indianisation.

93.1. State-managed Railways.—(a) *Superior Services.*—20 appointments were made to the Superior Railway Services by direct recruitment. Details are given below:—

State-managed Railways—Direct recruitment

DEPARTMENT.	VACANCIES FILLED BY									
	EUROPEANS.	INDIANS								
		Hindus		Muslims	Anglo Indians and Domiciled Europeans	Sikhs	Indian Christians	Parsis	Other Communities	Total
		Other than Depressed Classes	Depressed Classes							
Engineering . .	3	1		1		.	2			4
Accounts . .	..	..	.	1				..	.	1
Transportation (Traffic) and Commercial	3	2		1	.	..	..	.	.	3
Transportation (Power) and Mechanical Engineering	1	.	..		..					
Other Departments .	1	4	.	..	.				.	4
TOTAL .	8	7	..	3	..	.	2	.		12

The large number of European officers recruited was due to officers selected against indents for previous years joining during the year, difficulties created by the war caused delay in joining in some cases Only three of the officers were recruited against the quota for 1940-41 Recruitment of European officers has now been suspended for the duration of the war

Muslims secured 25 per cent of the Indian vacancies A further vacancy was reserved for a Muslim in the Coal Department but no qualified Muslim candidate was forthcoming.

State-managed Railways—Promotion

Four officers were promoted from the Lower Gazetted Service to the Superior Service; of these two were Hindus and two were Anglo-Indians or Domiciled Europeans

Lower Gazetted Service—34 promotions were made to the Lower Gazetted Service in the various departments. 11 went to Europeans and 23 to Indians of whom 11 were Hindus, 2 Muslims, 9 Anglo-Indians and Domiciled Europeans, and 1 Sikh.

93.2. Company-managed Railways.—The following table gives a summary of direct recruitment made to the Superior Services on Company-managed Class I Railways (excluding His Exalted Highness the Nizam's State, Jodhpur and Mysore State Railways) during the year under review. A detailed statement by individual railways will be found in Appendix C—V(*a*) of Volume II of this report.

Company-managed Railways—Direct recruitment.

DEPARTMENT.	VACANCIES FILLED BY							
		INDIANS.						
		Hindus.						
	EUROPEANS.	Other than Depressed Classes.	Depressed Classes.	Muslims.	Anglo-Indians and Domiciled Europeans.	Sikhs.	Parsis.	TOTAL.
Agency . . .	..	..	..	1	..	..	..	1
Accounts . . .	..	1	..	..	..	..	..	1
Engineering . . .	1	2	..	1	1	1	1	6
Transportation (Traffic) and Commercial.	..	2	..	..	1	..	..	3
Transportation (Power) and Mechanical Engineering.	..	2	..	..	..	..	..	2
Stores	..	..	..	1	..	..	..	1
Other Departments .	2	..	..	..	..	..	..	..
TOTAL .	3	7	..	3	2	1	1	14

Percentage { Europeans . . . 17·6
{ Indians . . . 82·4

Company-managed Railways—Promotion.

Fourteen officers were promoted from lower ranks to the Superior Service during the year. These comprised five Anglo-Indians, four Hindus, three Europeans, one Muslim and one Indian Christian.

State and Company-managed Railways.

The over-all direct Indian recruitment to Superior Railway Services on the State and Company-managed Railways, taken together, gives percentages as follows:—

	Per cent.
Hindus	53·9
Muslims	23·1
Sikhs	3·8
Indian Christians	7·7
Anglo-Indians and Domiciled Europeans	7·7
Parsis	3·8

94. **Review of the progress made since 1934.**—The statements on the following pages will throw further light on the progress made in Indianisation and in the recruitment of the various communities both on State-managed and Company-managed Railways since 1934, as reflected in the relative strength of Europeans and Indians belonging to the various communities. Part I relates to superior staff and Part II to subordinate staff on scales of pay rising to Rs. 250 and over.

PART I.

Statement of gazetted officers (both Superior and Lower Gazetted Service) on State-managed Railways and Officers of corresponding rank on Company-managed (Class I) Railways (excluding H. E. H. the Nizam's State, Jodhpur and Mysore State Railways) on the 31st March 1934, 31st March 1940 and 31st March 1941.

31st March 1934

Name of Railway	Europeans	Indians — Hindus — Other than Depressed classes	Indians — Hindus — Depressed classes	Indians — Muslims	Indians — Anglo-Indians and Domiciled Europeans	Indians — Sikhs	Indians — Indian Christians	Indians — Parsis	Indians — Other communities	Indians — Total	Total number on the Railway (column 2 plus 11)
1	2	3	4	5	6	7	8	9	10	11	12
State-managed Railways											
Eastern Bengal	56	42		6	11	2	3		1	65	121
East Indian	174	78		14	34	3	2		2	133	307
Great Indian Peninsula	145	35		11	9		7	..	6	68	213
North Western	136	80		22	14	10	5			131	267
Railway Board and miscellaneous offices	38	10		6	6		1		1	24	62
TOTAL	549	245		59	74	15	18		10	421	970
Company-managed Railways											
Assam Bengal	39	15		5	7	1				28	67
Bengal Nagpur	125	42		7	14	2	1		2	69	193
Bengal and North-Western	59	7		4	2					13	72
Bombay, Baroda and Central India	123	32		3	2	1	3		7	48	171
Madras and Southern Mahratta	96	27			6	2	3		5	43	139
Rohilkund and Kumaon	10	2		3						5	15
South Indian	73	45		1	9		1			56	129
TOTAL	525	170		23	40	6	8		14	261	786
GRAND TOTAL	1,074	415		82	114	21	26		24	682	1,756

31st March 1940

Name of Railway	Europeans	Indians — Hindus — Other than Depressed classes	Indians — Hindus — Depressed classes	Indians — Muslims	Indians — Anglo-Indians and Domiciled Europeans	Indians — Sikhs	Indians — Indian Christians	Indians — Parsis	Indians — Other communities	Indians — Total	Total number on the Railway (column 13 plus 22)
1	13	14	15	16	17	18	19	20	21	22	23
State-managed Railways											
Eastern Bengal	39	58		6	17		1			82	121
East Indian	106	107		15	38	5	3	3		171	277
Great Indian Peninsula	106	51		16	18		11	8		103	209
North Western	106	90		35	22	15	4			166	272
Railway Board and miscellaneous offices	45	21		3	6	2	1			33	78
TOTAL	402	327		74	101	22	20	11		555	957
Company-managed Railways											
Assam Bengal	28	19		6	5	1		1		32	60
Bengal Nagpur	92	50		15	31	3	1	2		102	194
Bengal and North-Western	51	8		8	1	4	1			22	73
Bombay, Baroda and Central India	92	45		13	3	1	5	11	1	84	176
Madras and Southern Mahratta	70	42		3	7	2	6	6		66	136
Rohilkund and Kumaon	6	3		2	3					8	14
South Indian	51	56		6	11		3			76	127
TOTAL	390	223		58	61	11	16	20	1	390	780
GRAND TOTAL	792	550		132	162	33	36	31	1	945	1,737

31st March 1941

Name of Railway	Europeans	Indians — Hindus — Other than Depressed classes	Indians — Hindus — Depressed classes	Indians — Muslims	Indians — Anglo-Indians and Domiciled Europeans	Indians — Sikhs	Indians — Indian Christians	Indians — Parsis	Indians — Other communities	Indians — Total	Total number on the Railway (column 24 plus 33)
1	24	25	26	27	28	29	30	31	32	33	34
State-managed Railways											
Eastern Bengal	37	58		8	15	1	3	1		86	123
East Indian	94	99		14	34	5	3	3		158	252
Great Indian Peninsula	94	55		15	18		12	7		107	201
North Western	83	82		37	21	17	4			161	244
Railway Board and miscellaneous offices	41	27		2	5	2	1			37	78
TOTAL	349	321		76	93	25	23	11		549	898
Company-managed Railways											
Assam Bengal	27	20		6	6	1		1	..	34	61
Bengal Nagpur	86	52		17	29	3	1	1		103	189
Bengal and North-Western	46	8		8	2	4	1			23	69
Bombay, Baroda and Central India	86	40		16	7	1	5	12	1	82	168
Madras and Southern Mahratta	65	44		4	7	2	6	6		69	134
Rohilkund and Kumaon	7	3		2	2					7	14
South Indian	49	56		5	11		3			75	124
TOTAL	366	223		58	64	11	16	20	1	393	759
GRAND TOTAL	715	544		134	157	36	39	31	1	942	1,657

Statement showing the percentages of the relative strength of Europeans and Indians of various communities.

Community		Railways	1934	1940	1941
Europeans		State-managed Railways	66 60	42 01	38 86
		Company-managed Railways	66 79	50 00	48 22
		TOTAL	68 16	45 60	43 15
Indians — Hindus	Other than Depressed classes	State managed Railways	25 26	34 17	35 75
		Company-managed Railways	21 63	28 59	29 38
		TOTAL	23 63	31 66	32 83
	Depressed classes	State-managed Railways			
		Company managed Railways			
		TOTAL			
Indians — Muslims		State-managed Railways	6 08	7 73	8 46
		Company-managed Railways	2 93	7 44	7 64
		TOTAL	4 67	7 60	8 09
Indians — Anglo-Indians and Domiciled Europeans		State-managed Railways	7 63	10 55	10 38
		Company-managed Railways	5 09	7 82	8 43
		TOTAL	6 49	9 33	9 46
Indians—*contd* — Sikhs		State managed Railways	1 54	2 30	2 78
		Company-managed Railways	0 76	1 41	1 45
		TOTAL	1 20	1 90	2 17
Indian Christians		State managed Railways	1 86	2 09	2 56
		Company managed Railways	1 02	2 05	2 11
		TOTAL	1 48	2 07	2 35
Parsis		State managed Railways	*	1 15	1 23
		Company-managed Railways	*	2 58	2 64
		TOTAL	*	1 78	1 87
Other communities		State managed Railways	1 03		
		Company managed Railways	1 78	0 13	0 13
		TOTAL	1 37	0 06	0 06
TOTAL		State-managed Railways	43 40	57 99	61 14
		Company managed Railways	33 21	50 00	51·78
		TOTAL	38 84	54 40	56 85

* Parsis included in "other communities" in 1934

NOTE.—The staff on loan from the Indian Accounts and Service are not included

PART II.

Statement of subordinates on scales of pay rising to Rs. 250 per mensem and over on Class I Railways (excluding H. E. H. the Nizam's State, Jodhpur and Mysore State Railways), on the 31st March 1934, 31st March 1940 and 31st March 1941.

Name of Railway.	31st March 1934.											31st March 1940.											31st March 1941.										
		Indians.											Indians.											Indians.									
		Hindus.											Hindus.											Hindus.									
	Europeans.	Other than Depressed classes.	Depressed classes.	Muslims.	Anglo-Indians and Domiciled Europeans.	Sikhs.	Indian Christians.	Parsis.	Other communities.	Total.	Total number on the Railway (column 2 plus 11).	Europeans.	Other than Depressed classes.	Depressed classes.	Muslims.	Anglo-Indians and Domiciled Europeans.	Sikhs.	Indian Christians.	Parsis.	Other communities.	Total.	Total number on the Railway (column 13 plus 22).	Europeans.	Other than Depressed classes.	Depressed classes.	Muslims.	Anglo-Indians and Domiciled Europeans.	Sikhs.	Indian Christians.	Parsis.	Other communities.	Total.	Total number on the Railway (column 24 plus 33).
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
State-managed Railways.																																	
Eastern Bengal	63	112	..	9	169	4	3	..	3	330	393	45	194	..	11	116	6	3	..	4	384	429	59	211	..	13	143	4	3	..	1	375	434
East Indian	477	458	..	53	921	17	7	..	5	1,461	1,938	262	568	2	72	912	12	9	3	7	1,585	1,847	232	590	3	75	906	13	7	4	7	1,605	1,837
Great Indian Peninsula	252	225	..	35	614	10	100	..	77	1,061	1,313	110	251	1	37	611	13	87	41	26	1,067	1,177	117	250	1	37	604	9	76	39	24	1,040	1,157
North Western	333	337	..	181	352	92	23	..	33	1,018	1,351	206*	384	..	248	325*	97*	17*	22	13*	1,106*	1,312*	225	370	..	243	270	95	15	21	12	1,026	1,251
Railway Board and miscellaneous offices.	1	134	..	27	21	12	5	..	2	201	205	6	178	1	30	26	13	5	..	..	253	259	5	174	1	25	21	11	5	..	..	249	254
TOTAL	1,126	1,296	..	305	2,080	135	138	..	120	4,074	5,200	629*	1,575	4	398	2,053*	141*	121*	66	50*	4,408*	5,037	629	1,595	5	403	1,944	138	106	64	44	4,302	4,931
Company-managed Railways.																																	
Assam Bengal	17	34	..	4	38	2	1	..	3	82	99	12	29	1	5	46	5	3	..	..	99	111	12	39	1	5	48	2	5	..	1	101	113
Bengal Nagpur	181	201	..	10	395	16	12	..	6	640	821	67	247	2	24	466	17	32	3	..	791	858	50	253	2	27	570	18	13	3	2	918	968
Bengal and North-Western	16	20	..	9	58	1	1	..	..	89	105	16	31	1	7	66	..	..	..	1	106	122	18	28	1	7	66	..	..	..	1	103	121
Bombay, Baroda and Central India	139	300	..	35	317	4	12	..	110	817	956	130	330	..	31	240	2	32	95	33	809	939	125	345	1	36	268	2	34	95	33	814	939
Madras and Southern Mahratta	68	51	..	..	184	..	4	..	6	245	313	43	64	..	2	144	2	5	4	1	222	265	40	65	..	2	144	2	7	5	1	226	266
Rohilkund and Kumaon	7	2	..	1	10	..	..	..	..	13	20	3	3	..	3	14	..	..	..	..	20	23	1	3	..	3	17	..	..	..	..	23	24
South Indian	39	90	..	6	159	..	10	..	1	266	305	21	89	1	10	117	..	16	..	..	233	254	16	93	2	7	120	..	18	..	..	240	256
TOTAL	167	698	..	74	1,161	23	70	..	135	2,161	2,628	292	801	5	82	1,133	26	88	102	35	2,280	2,572	262	856	7	87	1,233	24	77	103	38	2,425	2,687
GRAND TOTAL	1,593	1,994	..	379	3,241	158	208	..	255	6,235	7,828	921*	2,376	9	480	3,186*	167*	209*	168	85*	6,688*	7,609*	891	2,451	12	490	3,177	162	183	167	85	6,727	7,618

Statement showing the percentages of the relative strength of Europeans and Indians of various communities.

			1934.	1940.	1941.
Europeans		State-managed Railways	21·65	12·49*	12·76
		Company-managed Railways	17·76	11·35	9·75
		TOTAL	20·35	12·10*	11·70
Indians	Hindus — Other than Depressed classes	State-managed Railways	24·92	31·26	22·35
		Company-managed Railways	26·55	31·45	31·86
		TOTAL	25·47	31·33	22·17
	Hindus — Depressed classes	State-managed Railways	..	0·08	0·10
		Company-managed Railways	..	0·20	0·26
		TOTAL	..	0·12	0·16
	Muslims	State-managed Railways	5·87	7·90	8·17
		Company-managed Railways	2·82	3·19	3·24
		TOTAL	4·84	6·30	6·43
	Anglo-Indians and Domiciled Europeans	State-managed Railways	40·00	40·76*	39·42
		Company-managed Railways	44·16	44·05	45·89
		TOTAL	41·40	41·87*	41·70
Indians—*contd.*	Sikhs	State-managed Railways	2·00	2·86*	2·59
		Company-managed Railways	0·88	1·61	0·89
		TOTAL	2·02	2·29*	2·13
	Indian Christians	State-managed Railways	2·65	2·40*	2·15
		Company-managed Railways	2·66	3·42	2·87
		TOTAL	2·68	2·75*	2·40
	Parsis	State-managed Railways	†	1·31	1·30
		Company-managed Railways	†	3·97	3·53
		TOTAL	†	2·21	2·19
	Other communities	State-managed Railways	2·31	1·00*	0·85
		Company-managed Railways	5·17	1·26	1·41
		TOTAL	3·26	1·12*	1·12
	TOTAL	State-managed Railways	78·35	87·51*	87·24
		Company-managed Railways	82·24	88·65	90·25
		TOTAL	79·65	87·90*	88·30

* Revised figures.

† Parsis included in "other communities" in 1934.

It will be observed that the Indian element in the superior services has risen from 43 40 per cent. on State-managed and 33 21 per cent. on Company-managed Railways in 1934 to 61 14 per cent. on State-managed and 51·78 per cent on Company-managed Railways in 1941 Among Indians the percentages by communities in the years 1934 and 1941 were as shown below:—

—	State-managed Percentages 1934	State-managed Percentages 1941	Company-managed Percentages 1934	Company-managed Percentages 1941
Hindus { Other than depressed classes	25 26	35·75	21 63	29 38
Hindus { Depressed classes . .	..	.	.	..
Muslims	6·08	8 46	2·93	7·64
Anglo-Indians and Domiciled Europeans	7 63	10 36	5 09	8 43
Sikhs	1 54	2·78	0 76	1·45
Indian Christians	1 86	2 56	1 02	2·11
Parsis	*	1·23	*	2 64
Other Communities. . .	1 03	.	1 78	0 13

* Parsis were included in "Other communities" in 1934

Turning to the subordinate staff on scales of pay rising to Rs 250 per mensem and over, the corresponding figures are as under —

—	State-managed Percentages 1934	State-managed Percentages 1941	Company-managed Percentages 1934	Company-managed Percentages 1941
Europeans	21·65	12·76	17 76	9·75
Indians—				
Hindus { Other than depressed classes.	24 92	32·35	26·55	31 86
Hindus { Depressed classes .	.	0·10	.	0 26
Muslims	5·87	8 17	2·82	3 24
Anglo-Indians and Domiciled Europeans.	40 00	39 42	44 16	45·89
Sikhs	2 60	2·80	0 88	0 89
Indian Christians . . .	2 65	2·15	2 66	2·87
Parsis	*	1·30	*	3·83
Other Communities	2·31	0·95	5·17	1·41
Total Indians .	78·35	87·24	82·24	90 25

* Parsis were included in "Other communities" in 1934

95. Representation of minority communities in subordinate railway services.—The figures given in Appendix C-V (*b*) of Volume II of this report (which corresponds with Appendix G-II, Volume I, of years previous to 1939-40) show by communities, the number and percentage of subordinate staff (excluding labourers and inferior servants), recruited to both permanent and temporary posts on State and Company-managed Railways during the year 1940-41. The following figures show the overall percentages on State and Company-managed Railways during the six years ending with 1940-41.

—	1935-36.	Total	1936-37.	Total	1937-38.	Total	1938-39.	Total	1939-40.	Total	1940-41.	Total
(i) Combined percentage figures of permanent and temporary recruitment.												
Europeans	0·19		0·2		0·1		0·1		0·2		0·1	
Hindus	57·09		54·1		55·0		56·0		57·5		56·9	
Muslims	28·50		31·2		29·9		29·9		29·2		28·8	
Anglo-Indians and Domiciled Europeans.	8·33		8·7		9·2		7·6		7·5		6·9	
Sikhs	1·70		2·1		2·3		2·2		2·1		2·2	
Indian Christians	3·49	5·51	3·1	5·5	2·8	5·6	3·4	6·1	3·0	5·4	4·3	7·1
Parsis	0·32		0·3		0·5		0·5		0·3		0·6	
Other communities	0·38		0·3		0·2		0·3		0·2		0·2	
(ii) Percentage figures of permanent recruitment.												
Europeans	..		0·5		0·4		0·3		0·2		0·1	
Hindus	..		55·6		56·0		54·4		58·0		58·7	
Muslims	..		26·4		26·5		27·1		24·8		23·3	
Anglo-Indians and Domiciled Europeans.	..		10·7		10·9		10·3		9·5		9·6	
Sikhs	..		1·2		1·8		2·2		1·8		1·3	
Indian Christians	..		4·5	6·2	3·6	6·0	4·2	7·3	4·5	7·1	5·6	7·9
Parsis	..		0·5		0·6		0·9		0·8		1·0	
Other communities	..		0·6		0·2		0·6		0·4		0·4	
(iii) Percentage figures of temporary recruitment.												
Europeans	..		..		0·1		..		0·2		0·1	
Hindus	..		53·0		54·4		56·9		57·0		55·8	
Muslims	..		34·6		31·8		31·4		31·0		31·9	
Anglo-Indians and Domiciled Europeans.	..		7·4		8·3		6·1		6·3		5·4	
Sikhs	..		2·8		2·5		2·2		2·4		2·7	
Indian Christians	..		2·1	5·0	2·4	5·3	3·0	5·5	2·0	4·5	3·5	6·6
Parsis	..		0·1		0·4		0·3		0·1		0·4	
Other communities	..		..		0·1		0·1		0·1		0·2	

NOTE.—Separate figures for permanent and temporary recruitment by communities for 1935-36 are not available.

From the figures given above it will be noticed that during the year under review the Anglo-Indian community did not obtain its quota of the combined permanent and temporary posts. This was due to the community obtaining only 5·4 per cent. in temporary recruitment, as members of this community do not generally offer themselves for such vacancies. They, however, obtained more than their prescribed percentage in permanent recruitment. The Muslims on the other hand while obtaining more than their reservation in total recruitment, fell below their quota in permanent recruitment. The reasons for this were firstly abnormally high recruitment on Company-managed Railways which have as a group lower percentage reservations for Muslims than State-managed Railways and the failure in particular of the

South Indian Railway to ... e difficulty of obtaining qualified ca ... however, were able to obtain Musli

It was mentioned in the last year's report that Mr Frank D'Souza was placed on special duty in December 1939 to review the working of the rules and orders relating to the representation of minority communities in the [illegible]

had with very few exceptions been conducted in the manner and to the extent laid down by Government. Mr D'Souza, however, in addition to pointing out certain errors of procedure in matters of detail on particular railways, made a number of recommendations designed, in his view, to give greater confidence to minority communities Orders on his suggestions regarding procedure were issued during the year, his other recommendations are still under consideration

96. Training of Staff.—Area Schools.—The School of Transportation at Chandausi and the Technical School at Jamalpur on the East Indian [illegible] ndidates on first [illegible] in service In [illegible] was introduced during the year and in the latter it is now found possible to give training in fuel economy to staff not merely of the East Indian Railway but also of the Bengal Nagpur, Eastern Bengal and Madras and Southern Mahratta Railways The Walton Training School on the North Western Railway has likewise continued its work of affording instructions to recruits and other employees

97. Improvement in the service conditions of the staff.—(a) *Extension of Provident Fund Benefits* —The consideration of extending provident fund benefits to those who had not already enjoyed them mentioned in last year's report resulted during the year under review in the decision that those in the following categories who were not previously allowed to subscribe to the fund should have the option of doing so with effect from the 1st of January 1941; (*a*) all employees irrespective of pay or status who have more than 16 years' service and (*b*) all employees drawing over Rs 30 a month This improvement in terms of service affords to a large body of lower paid railway servants an opportunity of making a more adequate provision for their retirement than was possible in the past.

(b) *Hours of Employment Regulations* —These regulations were extended to the Rohilkund and Kumaon and South Indian Railways from the 1st April 1940 and to the Assam Bengal and Bengal Nagpur Railways from the 1st January 1941 This completes the process of bringing all the employees of State-owned railways within the scope of these Regulations

97.1. Labour Legislation.—(a) *The Payment of Wages Act.*—In paragraph 101 of last year's report it was stated that railway administrations had been asked to report on the working of the Act, and any difficulties experienced in its application Their reports showed that while in general staff had benefited by the Act, considerable additional work had been thrown on Administrations and the Act appeared to need amendment in certain respects, particularly, with a view to the continuance of certain deductions such as, those relating to Security Deposits, repayment of Provident Fund bonus, etc , which should, in the interests of the staff, be continued

It was also stated in last year's report that railway administrations had been asked to review their existing procedure in dealing with disciplinary cases to see that such action did not tend to defeat the intentions underlying the Act. From reports received from railways the Board are satisfied that the procedure in force does not in practice defeat the intentions of the Act and that the few railway administrations who had adopted a " Conduct Marks " system had examined those systems with the same result

References from railways regarding the correct observance of the Act continued to engage the attention of the Board.

(b) *Conciliation Officer (Railways) and Supervisor of Railway Labour.*—The jurisdiction of this officer of the Labour Department extends at present to the Eastern Bengal, East Indian, Bengal Nagpur and Calcutta Port Commissioners Railways.

98. Railways Sports.—At their 12th annual general meeting held at New Delhi on the 25th of October 1940, the Indian Railways Athletic Association agreed that though it was desirable to continue the Inter-Railway Tournaments, held in New Delhi, the difficulties of releasing staff during the war for these competitions made it impracticable to do so. The Inter-Railway Tournaments at New Delhi have been discontinued for the period of the war, and although there has been some diminution in athletics and sports on individual railways inter-railway tournaments are still held locally where it is possible to make arrangements without interfering with war work.

99. Organised Labour—All-India Railwaymen's Federation.—As stated in paragraph 103 of last year's report a special meeting between the Railway Board and the All-India Railwaymen's Federation was held on the 4th and 5th April 1940, at which (*a*) the extension of Provident Fund benefits and (*b*) the position of railway labour due to rising prices were discussed. The nineteenth half-yearly meeting between the Railway Board and the Federation was held on the 8th January 1941, at which the following subjects so far as they referred to State-managed railways were discussed:—

(*a*) alleged grievances of employees of the Bengal-Dooars Railway on their transfer to State Railway Service.

(*b*) alleged grievances of ex-apprentices and retrenched employees.

(*c*) working of the rules regulating discipline and rights of appeal, and

(*d*) age of compulsory retirement for inferior servants.

As well as the above, special meetings with the Federation were also held on the 8th February and 15th March 1941 for discussions regarding the grant of a dearness allowance to railway employees, a matter which is dealt with in the next paragraph.

100. Dearness Allowance.—It was mentioned in the last year's report that the question of the grant of an increase in wages to railway employees in view of the rise in the cost of living since the outbreak of the war, was discussed with a deputation of the All-India Railwaymen's Federation just after the close of that year, *i.e.*, in April 1940. During the year under review, a Court of Enquiry under the Chairmanship of the Honourable Mr. Justice B. N. Rau, was appointed by Government to enquire into and report on the rise in the cost of living for lower paid staff and the justification if any for the grant of a war allowance to them. In order to expedite a decision in the matter, the enquiry was confined to the Great Indian Peninsula Railway, but Government undertook to consider the application to the employees of other State-managed Railways of any principles that might be adopted as a result of the enquiry in the case of Great Indian Peninsula Railway staff. After consideration of the Court's report by Government, the matter was discussed with a deputation of the All-India Railwaymen's Federation in February 1941 and in the light of these discussions, Government sanctioned the grant of dearness allowances to lower paid railway employees on the scale detailed below with effect from September 1940:—

Bombay and Calcutta (including suburbs)	Rs. 3 per mensem to those drawing Rs. 60 per mensem and below.
Selected industrial areas (*i.e.*, towns of over 100,000 inhabitants according to the 1931 census).	Rs. 2-8 per mensem to those drawing Rs. 50 per mensem and below.
Other areas	Rs. 2 per mensem to those drawing Rs. 30 per mensem and below.

It was at the same time decided that machinery for preparing and maintaining proper cost of living indices should be set up and the allowances then sanctioned were to be brought under review when these figures became available.

101. Railway staff and the war.—(a) *Release of individual officers for technical war work*—Individual officers had already been released for war service to some extent before the commencement of the year under review but this process was accelerated considerably during 1940-41 Apart from technical recruiting work and the production of munitions, both in administrative capacities and in Ordnance Factories greater number were released in connection with Railway Construction, Maintenance and Operating requirements in theatres overseas.

(b) *Release of non-gazetted staff.*—The release of non-gazetted staff, both those with mechanical qualifications and those qualified in other railway duties, proceeded during the year under review under terms which were common for both State-managed and Company-managed railway personnel In every case a lien on their railway appointment was given to those who volunteered with consideration for promotion under the "next below" rule

(c) *Labour Training Scheme*—The railways participated in the All-India Scheme organised by the Labour Department for the training of technicians for war service either overseas or in India While munitions production in railway workshops was handled either by permanent railway employees or staff recruited by the railway specially for this purpose, hundreds of men were also trained on behalf of the Labour Department's scheme. Thus railways not only avoided having to call upon the scheme for their own war requirements but were able to contribute towards the scheme by supplying men for the country's needs in other services.

(d) *Voluntary financial contributions towards the war*—Railway staff continued to give generously towards various war funds in response to appeals from His Excellency the Viceroy and the Governors of Provinces.

CHAPTER IX.

AMENITIES FOR PASSENGERS.

102. The amenities for the travelling public cover a large and varied field, and railways, as in the past, continued to make every endeavour to make railway travel, especially in the lower classes, more attractive. Improvements made during this year in certain main directions are described in the succeeding paragraphs.

103. New types of third class carriages.—All new and rebuilt broad gauge and metre gauge lower class stock, totalling 246 carriages, placed in service during the year conformed to the Railway Board's approved standard.

104. Measures taken to ensure security of women passengers in trains.—The safety of women passengers continued to have the constant attention of railways. Progress continued in the fitting of internal safety door catches as rolling-stock passed through workshops; the programme of some railways having now been completed. The South Indian Railway continued to fit iron bars where they were not already provided, the East Indian Railway made provision for extra lighting, and the Bengal Nagpur Railway for improved lighting. In some cases additional alarm chain handles were also provided.

As usual, special attention was paid to the marshalling of trains with the object of positioning lower class compartments for women in the most suitable places. Ticket checking staff maintained a vigilant look out to prevent undesirables travelling in servants' compartments when they were close to women's compartments.

105. Booking offices and out-agencies.—A permanent additional third class booking office was opened at Muzaffarpur (Bengal and North-Western Railway). Apart from providing more unmanned halts between stations, regular booking offices were also opened at certain passenger halts between stations, *viz.*, two on the Assam Bengal Railway and four on the Bombay, Baroda and Central India Railway. As usual, to facilitate booking of passengers at mela centres, temporary booking offices were opened during important mela periods. These were opened at ten different stations on the Bengal and North-Western Railway, thirteen on the Great Indian Peninsula Railway and at twelve festival centres on the South Indian Railway. The Bombay, Baroda and Central India Railway set apart at Bombay Central a separate booking window for ladies travelling by the " Flying Ranee " on Saturdays. Booking facilities were brought nearer to the railway customers in outlying areas away from the rail head by opening out-agencies which undertook to arrange for the through transport of traffic by road or river to the nearest railway station and thence by rail to destination or *vice versâ*. An out-agency was opened at (i) Barhalganj served by Dohrighat railway station on the Bengal and North-Western, (ii) at Allagadda served by Nandial on the Madras and Southern Mahratta Railway and (iii) at Tamman, Ramnagar on Chenab and Khaur on the North Western Railway.

Further facilities were also provided by the opening of city booking offices. Seven such city booking offices were opened on the North Western Railway.

106. Waiting rooms and waiting halls.—Additional conveniences were provided for passengers waiting for trains: waiting rooms for women —at Chakiting (Assam Bengal Railway), at Bijni, Tangla, Taldi and Damukdia (Eastern Bengal Railway) for both intermediate and third classes combined and at Jodhpur (Jodhpur Railway) for first and second classes; upper class waiting rooms—at Namtiali and Kamerbandha-Ali (Assam Bengal Railway), at Barpeta Road station (Eastern Bengal Railway), at Belmuri and Nimtita (East Indian Railway), at Ramdora and Pokaran (Jodhpur Railway) and at Madeji Road (North Western Railway): intermediate class waiting rooms—at Bhubaneswar and Muri (Bengal Nagpur

Railway), at Jalpaiguri (Eastern Bengal Railway), and at Larkana and Dadu (North Western Railway); waiting halls for third class passengers—at Feni and Sylhet Bazar (Assam Bengal Railway), at Raj Nandgaon and Burnpur (for women only) (Bengal Nagpur Railway) and at Naultha station (North Western Railway). Several passenger shelters were also built at passenger halts opened by railways to pick up passengers at specific points between stations, these were at Heeranpur Halt (Assam Bengal Railway), at Mancheswar, Nagarwara, Kella and Gangiwara Passenger halts (Bengal Nagpur Railway).

Improvements were also effected in the existing facilities These include cementing of floors of waiting halls and waiting rooms, providing additional taps for bathing and additional benches for seating of waiting passengers

The following statement summarises the number of *waiting rooms and waiting halls* provided on each Class I railway for the use of intermediate and third class passengers :—

—	A. B.	B. & N.-W	B. N	B., B & C. I	E. B.	E. I	G I. P	Jodhpur	M. & S. M.	Mysore State	N. S.	N W C.	N W S.	R. & K.	S I.
1. Total number of stations open for passenger traffic	301	252	568	639	488	760	564	168	490	130	213	873	182	98	[illegible]
2. Number of stations at which waiting rooms or halls have been provided for intermediate class passengers :—															
(i) generally	12	5	21	1	10	153	..	2	6		.	23	4		
(ii) for women only . .	5	11	14	1	4	66		1				19	3	3	
3. Number of stations at which third class waiting rooms or halls have been provided .—															
(i) generally	266	252	473	484	469	399	468	123	452	113	213	699	111	95	565
(ii) for women only . . .	136	34	72	2	345	185	15	8	11	5	2	49	13	12	13
4. Percentage of stations at which waiting rooms or halls have been provided as compared with the total number of stations open for passenger traffic :—															
(i) for intermediate class, generally .	4·00	1·42	3·70	0 16	2·05	20·0		1 19	1·22			2·29	2·20		
(ii) for intermediate class, women only.	1 66	3 13	2 40	0·16	0 82	7 31		0·60				2·15	1·6	3·06	
(iii) for third class, generally . .	88 4	71 6	83 3	75·8	96·1	52·6	83·0	7 32	92·2	87·0	100·0	80·1	61·0	96·9	87·3
(iv) for third class, women only .	45·0	9·66	12·7	0 31	70·7	24 2	2 66	4 76	2·24	3·85	0·94	5·5	7 14	12·2	2·14

C.—Commercial. S.—Strategic.

107. Covered and raised platforms.—The following statements show the position at the end of the year 1940-41 in regard to platforms generally :—

Number of stations provided with covered platforms.

—	A. B.	B. & N.-W.	B. N.	B., B. & C. I.	E. B.	E. I.	G. I. P	Jodhpur	M. & S. M	Mysore State.	N. S	N. W C.	N. W S.	R. & K.	S. I.
1. Total number of stations open for passenger traffic	301	252	568	638	488	766	564	169	490	130	213	873	182	99	601
(i) Class D (or flag) stations . .	116	22	66	134	128	132	100	61	77	13	72	240	39	6	145
(ii) Other than class D (or flag) stations.	185	230	502	504	360	634	464	107	413	117	141	433	141	92	456
2 (i) Number of stations at which there are two or more platforms.	91	32	58	119	92	297	190	5	53	5	26	225	12	9	64
(ii) Total number of platforms at such stations.	210	82	176	269	241	943	432	27	151	12	54	434	30	29	227
(iii) Total number of covered platforms at such stations.	7	.	4	176	118	234	125	6	47	3	14	144	3	10	97
(iv) Percentage of (iii) to (ii) . .	3·3	.	2·27	65·7	49·0	23·9	27 7	22·2	46 4	25·0	26 1	27·0	17·0	34·5	47·7
3 (i) Number of stations other than class D at which there is only one platform	94	224	424	333	224	274	300	96	160	112	130	429	131	82	272
(ii) Number of such stations at which there are covered platforms.	..	..	1	5	..	40	9	..	22	1	..	9	1		5
(iii) Percentage of (ii) to (i) . .	..	.	0·23	1 41	..	20·4	3·00	..	5 11	0·89	..	2 10	0·75	..	2·16

C.—Commercial. S.—Strategic.

Number of stations provided with platforms above rail level.

—	A. B.	B. & N.-W.	B. N.	B., B. & C. I.	E. B.	E. I.	G. I. P.	Jodh-pur.	M. & S. M.	Mysore State.	N. S.	N. W. C.	N. W. S.	R. & K.	S. I.
1. Total number of stations open for passenger traffic.	301	352	568	638	485	766	564	168	490	130	213	873	182	98	601
(i) Class D (or flag) stations	116	22	66	134	125	132	100	61	77	13	72	240	39	6	145
(ii) Other than class D (or flag) stations.	185	330	502	504	360	634	464	107	413	117	141	633	143	92	456
2. (i) Number of stations other than flag stations at which there are more than one platform.	91	32	76	100	88	373	181	8	53	5	11	213	12	9	84
(ii) Total number of platforms at such stations.	210	82	159	247	227	941	394	27	151	10	32	509	31	24	222
(iii) Total number of platforms at such stations above rail level.	12	67	132	233	184	611	314	20	151	7	32	389	24	20	152
(iv) Percentage of (iii) to (ii)	5·71	81·7	83·0	94·3	81·1	64·9	79·7	74·1	100·0	70·0	100·0	76·4	77·4	83·3	68·5
3. (i) Number of stations at which there is only one platform.	210	318	482	491	394	352	332	160	437	125	159	634	166	87	517
(ii) Number of such stations at which platforms are above rail level.	3	155	124	203	136	175	192	11	281	43	73	188	84	27	273
(iii) Percentage of (ii) to (i)	1·43	45·7	25·7	41·3	34·5	49·7	57·8	6·88	64·3	34·4	28·6	29·7	50·6	31·0	52·8

C. = Commercial. S. = Strategic.

108. Refreshment rooms for Hindus and Mahomedans.

The table below shows the number of stations in Class I Railways, provided with refreshment rooms for Hindus and Mahomedans on 31st March 1941, and of these the additions that were made during 1940-41.

Railway.	NUMBER OF STATIONS PROVIDED AT THE END OF THE YEAR WITH			NUMBER OF REFRESHMENT ROOMS WHICH WERE PROVIDED DURING THE YEAR.	
	Hindu and Mahomedan refreshment rooms.	Hindu refreshment room (rooms) only.	Mahomedan refreshment room (rooms) only.	Hindu.	Mahomedan.
Assam Bengal	7	..	..	..	..
Bengal and North-Western	..	10	10	..	..
Bengal Nagpur	15	2	6	1	..
Bombay, Baroda and Central India	1	11	6	..	..
Eastern Bengal	10	3	..	..	..
East Indian	14	6	4	..	..
Great Indian Peninsula	..	8	7	1	1
Jodhpur	2	1	..	..	..
Madras and Southern Mahratta †	..	25*	5	..	..
Mysore State	16	14	2	..	..
His Exalted Highness the Nizam's State	11	..	..	..	..
North Western	21	..	..	..	..
Rohilkund and Kumaon	..	..	..	..	..
South Indian	..	26*	6	..	..

* Hindu refreshment rooms, though run on Hindu lines supplying vegetarian Hindu food, are open to other communities also.
† Excludes one Christian refreshment room at Mormugao Harbour.

109. Vendors' stalls in waiting halls and on platforms.—Additional new stalls were opened on most of the railways, two on the Bengal Nagpur, seven on the East Indian, two on the Great Indian Peninsula and three on the Jodhpur Railways. Two new Tea rooms were under construction at Aurangabad and Mohamadabad-Bidar. On His Exalted Highness the Nizam's State Railway two vending trollies were supplied to the refreshment rooms. On the Assam Bengal Railway the arrangements for Indian catering were overhauled, as a result of which train vending was discontinued from 1st October 1940 and stalls were provided at a larger number of stations. A Catering Inspector with medical qualifications was appointed to inspect the Indian Refreshment rooms and Stalls. Marked improvement in the quality of food-stuffs supplied to the travelling public was reported.

110. Water supply for passengers.—Arrangements for the supply of clean and fresh drinking water to the travelling public continued to receive special attention of railways. Additional tube-wells were sunk at four stations on the Bengal and North-Western, two on the Bengal Nagpur and four on the Eastern Bengal Railways At certain large stations more water taps and hydrants were installed on platforms and in waiting rooms. Adequate arrangements were made to keep water cool by storing in earthen vessels by providing huts or cages During the hot weather, the permanent strength of watermen was increased by employment of temporary hands to supply water in trains and on platforms The East Indian Railway also provided trollies at certain stations carrying earthen *matkas* containing cool drinking water and reinforced concrete troughs for sand-beds for the storage of drinking water at thirty-three stations Arrangements were also completed for filtering and chlorinating the water supply at Tangbhadra, a pilgrim centre on the South Indian Railway.

111. Restaurant or buffet car services.—With the few minor changes indicated below the existing restaurant or buffet car services were maintained.

Eastern Bengal Railway —A new dining car was brought into service.

Great Indian Peninsula Railway.—Restaurant cars catering in the European style were run on eight trains, including the Deccan Queen which runs between Bombay and Poona on public holidays from November to April and on week ends from May to October, instead of nine in the previous year, the Imperial Indian Mail having been withdrawn from service

Jodhpur Railway —Buffet cars were introduced on 45 Up and 46 Down between Pithoro and Jhudo this year

Madras and Southern Mahratta Railway —Buffet car services on 13 Up and 14 Down between Bezwada and Guntakal, were discontinued

His Exalted Highness the Nizam's State Railway.—Two broad gauge Indian buffet cars, formerly running on the Hyderabad-Bezwada section, were run on two important trains on the Wadi-Kazipet section for a part of the year and then transferred to Secunderabad and Purli-Vaijnath section

North Western Railway.—The dining car services on 3 Up and 4 Down Frontier Mails, running between Lahore and Rawalpindi, were discontinued from 1st July 1940.

South Indian Railway —The dining car service which was run in previous years between Erode and Mettupalaiyam during the Hill season only, was not introduced and Indian buffet cars providing light refreshments were discontinued with effect from 1st September 1940.

112. Improvements in existing lower class carriages.—Amongst the improvements carried out by Railways were the following:—

Lights were improved in a number of carriages on the Bengal Nagpur, Eastern Bengal and South Indian Railways and independent light switches provided in intermediate class compartments of 23 carriages on the Assam Bengal Railway besides 370 intermediate and third class compartments being fitted with illuminated glass panels. On the latter railway intermediate class compartments of 155 carriages were provided with imitation leather covered cushions and 13 carriages provided with cushions on upper berths A number of carriages on this railway and Rohilkund and Kumaon Railway were provided with improved type seats

On the Bengal and North-Western Railway a number of carriages not fitted with latrines and those fitted with old type latrines were rebuilt to an approved standard; on the Rohilkund and Kumaon Railway certain old type

carriages were provided with three or four latrines instead of the two previously fitted. Eight metre gauge carriages on the South Indian Railway not provided with latrines were so fitted.

Further improvements made were the painting of the latrine compartments on the Bengal Nagpur Railway stock with aluminium paint and better lighting on Mail and Passenger stock of the Madras and Southern Mahratta Railway. Flushing arrangements were improved in inter and third class latrines of 583 carriages of the Assam Bengal Railway while wash-hand basins and mirrors were provided in latrines of 7 inter class carriages. This railway also fitted brackets for holding *lota* and soap in the latrines of 210 inter and third class carriages. The latter fitting was also provided in a number of carriages on the Eastern Bengal Railway. Latrines on all mail rakes on the East Indian Railway have been provided with new pattern cemented pans and improved flushing arrangements. Separate *lota* filling cocks were also installed. On the North Western Railway the practice of fitting mirrors in inter class latrines continued and in addition, commodes were substituted for floor pans and a special indigenous mosaic flooring provided at the same time.

113. **Arrangements to ensure cleanliness of latrines in passenger trains.**—Railways continued to give their attention to the proper observance of the instructions in force for the cleaning of bathrooms and latrines in passenger trains at frequent intervals. To this end, the Eastern Bengal Railway embodied in the working time-table their instructions for filling the tanks of carriages; the Bombay, Baroda and Central India Railway exhibited notices in lavatories of lower class carriages drawing attention of the public that the services of sweepers could be had by informing guards or station staff.

114. **Overcrowding in third class carriages.**—The matter of overcrowding in third class carriages received the constant attention of railway administrations and every effort was made, by the adjustment of the composition of rakes and the provision of extra stock, to avoid any inconvenience. An annual census of third class passengers was, as usual, taken in the month of June, a period when passenger traffic is usually heavy. The results were carefully scrutinised and arrangements made, wherever possible, to remedy such overcrowding as was detected.

The local advisory committees took a keen interest in the question, and not only did frequent discussions take place but summaries of census results were also examined.

During the last half of the year, owing to heavy military demands an the necessity for conserving power, it was not always possible to meet requ for extra stock, a position which may be expected to deteriorate as w demands increase.

115. **Suggestion or complaint books or boxes.**—Suggestion or complaint books or boxes were provided at a large number of stations, and considerable use was made of them. All complaints were promptly inves and action taken wherever necessary. The attention of the travelling to the existence of complaint books or boxes was drawn by means of displayed in English and the local Indian languages, and in some ca ways also print this information in their time-tables and guides.

116. Foot over-bridges.—The statement below gives the number of stations provided with foot over-bridges on Class I Railways at the end of the year 1940-41 :—

Railway.	Number of stations provided with foot over-bridges on 31st March 1941	STATIONS PROVIDED WITH FOOT OVER-BRIDGES DURING THE YEAR 1940-41	
		Number	Name of Station
Assam Bengal	18	..	
Bengal and North Western	16	1	Jaynagar
Bengal Nagpur	85	1	Rajgangpur.
Bombay, Baroda and Central India	71	..	..
Eastern Bengal	71	.	..
East Indian	142	2	Bindki Road Khaga.
Great Indian Peninsula	78	..	..
Jodhpur	2	..	.
Madras and Southern Mahratta	45	..	
Mysore State	4	1	Banglore City goods yard
His Exalted Highness the Nizam's State.	5	..	..
North Western	148	..	.
Rohilkund and Kumaon	5	..	.
South Indian	48	2	Perianaikanpalaiyam Dalmiapuram

CHAPTER X.

MISCELLANEOUS.

117. Accidents.—The following are brief details of major accidents which occurred during the year :—

(*a*) On the 15th May 1940, No. 3 Down Frontier Mail, whilst approaching Jekot station on the Bombay, Baroda and Central India Railway, collided with No. 22/30 Up goods train near the down outer signal. This accident, unfortunately, resulted in 20 persons being killed and 14 injured. The approximate cost of the damage to railway property, as a result of this accident, amounted to Rs. 2,14,400.

(*b*) On the 28th May 1940, a Passenger train proceeding between Panchalam and Tindivanam stations on the South Indian Railway was struck by a cyclone, which capsized six of the ten passenger coaches. 5 persons were killed and 75 were injured, six of them seriously. The cost of the damage to rolling-stock and permanent-way amounted to approximately Rs. 75,000.

(*c*) On the 5th August 1940, No. 8 Down Dacca Mail was derailed between Chuadanga and Jayrampur stations on the Eastern Bengal Railway owing to the malicious removal of a rail, resulting in 41 persons being killed and 75 sustaining injuries. The damage to the rolling-stock and permanent-way amounted to approximately Rs. 1,05,000.

(*d*) On the 15th September 1940, between Benapur and Narayangarh stations on the Bengal Nagpur Railway, an Up light engine ran into a motor bus at a level crossing. Six persons, travelling in the bus, were killed and seven injured.

(*e*) On the 18th December 1940, No. 528 Down shunting goods train collided at Khairpur Mir station on the North Western Railway with No. 191 Up passenger train, which was leaving the station. Fortunately no one was injured, but the damage to property was somewhat high and was estimated at approximately Rs. 40,000.

118. Review of accident statistics.—(*a*) The following table shows the number of passengers, railway servants and other persons killed and injured in accidents on Indian Railways, during the year 1940-41 as compared with the previous year; these exclude casualties in railway workshops :—

Cause.	Killed.		Injured.	
	1939-40.	**1940-41.**	1939-40.	**1940-41.**
A.—Passengers.				
(i) In accidents to trains, rolling-stock, permanent-way, etc.	44	**62**	134	**142**
(ii) In accidents caused by movements of trains and railway vehicles exclusive of train accidents.	183	**244**	1,132	**1,091**
(iii) In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	2	**2**	32	**86**
TOTAL	229	**308**	1,298	**1,319**

Cause.	Killed		Injured.	
	1939-40.	1940-41.	1939-40	1940-41.
B.—Railway servants.				
(i) In accidents to trains, rolling-stock, permanent-way, etc.	13	14	93	141
(ii) In accidents caused by movements of trains and railway vehicles exclusive of train accidents.	152	192	3,871	4,364
(iii) In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	13	37	11,918	12,868
TOTAL .	178	243	15,882	17,373
C.—Other than passengers and railway servants.				
(i) In accidents to trains, rolling-stock, permanent-way, etc.	39	27	73	53
(ii) In accidents caused by movements of trains and railway vehicles exclusive of train accidents.	3,069	3,148	908	954
(iii) In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	22	26	121	134
TOTAL .	3,130	3,201	1,102	1,141
GRAND TOTAL .	3,537	3,752	18,282	19,833

Of 3,752 persons killed, 3,201 or 85 per cent. were other than passengers and railway servants and of this number 2,396 were 'trespassers' and 634 'suicides'. Of the 3,752, 65 persons were killed on railway premises due to causes other than the movement of trains, vehicles, etc.

The number of persons other than passengers and railway servants killed rose by 71 as compared with the previous year This was due principally to increases under 'trespassers' (69), and 'suicides' (11) There was an increase in the number of fatal accidents to 'passengers' and 'railway servants', the increases being 79 and 65 respectively.

(b) In the following statement a comparison is made of the number of passengers killed and injured in train accidents, *i.e.*, collisions, derailments, etc., as compared with the number of passengers carried during the last six years :—

Year.	* Number of passengers carried (in millions).	Killed.		Injured.	
		† Number.	Per million passengers carried.	† Number.	Per million passengers carried.
1935-36	506	5	0·01	87	0·17
1936-37	512	11	0·02	67	0·13
1937-38	545	105	0·19	174	0·32
1938-39	559	39	0·07	154	0·28
1939-40	560	44	0·08	131	0·23
1940-41	**604**	**26**	**0·04**	**65**	**0·11**

* Represents total of numbers carried on all railways.
† Excludes train wrecking and attempted train wrecking.

Out of 26 passengers killed and 65 injured, 20 killed and 14 injured were in the accident to No. 3 Down Frontier Mail near Jekot station on the Bombay, Baroda and Central India Railway, 5 killed and 6 injured on the South Indian Railway when No. 7 Passenger *ex*-Madras Egmore to Dhanushkodi was struck by a cyclone while running between Panchalam and Tindivanam stations and 16 injured due to the collision between No. 16 Up Passenger train and a Goods train on the Madras and Southern Mahratta Railway.

(c) The accidents to railway servants due to the movement of trains and railway vehicles exclusive of train accidents showed an increase of 40 under 'killed' and of 493 under 'injured'. The corresponding figures for Class I Railways for which details of the causes are available showed an increase of 42 under 'killed' and 477 under 'injured'. These are analysed as under :—

Cause.	Killed.		Injured.	
	1939-40.	**1940-41.**	1939-40.	**1940-41.**
(i) Misadventure or accidental	95	**146**	3,624	**4,015**
(ii) Want of caution or misconduct on the part of the injured person.	48	**41**	184	**254**
(iii) Want of caution or breach of rules, etc., on the part of servants other than the person injured.	3	**1**	19	**34**
(iv) Defective apparatus, appliances, etc., or want of sufficient appliances, safeguards, etc.	..	..	..	**1**
TOTAL .	146	**188**	3,827	**4,304**

(*d*) In the following statement an analysis is made of all the accidents on all Indian Railways which occurred during the years 1939-40 and 1940-41 grouped under the various causes. The details for each railway will be found in Appendix D of Volume II of this report :—

	1939-40.	1940-41.
1. Running over cattle	8,726	**7,743**
2. Derailments not involving passenger trains	4,725	**5,420**
3. Accidents due to failure of couplings and draft gear	1,889	**2,092**
4. Accidents due to failure of engines owing to faulty material, workmanship and operation arising from the working of the running staff	1,725	**1,630**
5. Accidents due to other rolling-stock failures	981	**1,042**
6. Accidents due to failure of engines owing to faulty material and workmanship in the mechanical department . .	459	**499**
7. Fires in trains or at stations or bridges	197	**245**
8. Land-slips	56	**206**
9. Running over obstructions (other than those included under 'Train wrecking', 'Attempted train wrecking' and 'Trains running into road traffic at level crossings')	248	**201**
10. Collisions involving goods trains or goods vehicles	147	**198**
11. Derailments of passenger trains . . .	198	**181**
12. Broken rails	279	**178**
13. Trains running into road traffic at level crossings	107	**105**
14. Attempted train wrecking . .	85	**79**
15. Accidents due to failure of axles . .	49	**64**
16. Flooding of permanent-way . .	86	**63**
17. *Passenger trains running in the wrong* direction through points but not derailed	60	**51**
18. Collisions between light engines .	48	**34**
19. Collisions involving passenger trains .	32	**31**
20. Accidents due to failure of tyres and wheels	13	**30**
21. Accidents due to failure of brake apparatus	13	**14**
22. Train wrecking	7	**11**
23. Failure of bridges, tunnels, etc. .	1	**5**
24. Miscellaneous	156	**173**
Total .	20,287	**20,285**

'Running over cattle' still accounts for the largest number of accidents, *i.e.*, 38 per cent. of the total : next in order are :—

	Per cent.
Derailments not involving passenger trains	27
Accidents due to failure of couplings and draft gear . .	10
Accidents due to failure of engines owing to faulty working of the running staff	8
Accidents due to other rolling-stock failures	5
Accidents due to failure of engines owing to faulty material and workmanship in the mechanical department . . .	2
Fires in trains or at stations or bridges	1
Land-slips	1

(e) Accidents in railway workshops accounted for the death of 12 and injuries to 8,575 railway servants, which marks an increase of 7 killed and decrease of 63 injured over the previous year.

119. Damage by floods, fires and other causes.—Brief particulars of the more serious floods or other calamities which affected railways during the year under review are given below :—

During May 1940, the Chittagong-Nizirhat Branch of the Assam Bengal Railway experienced the heaviest floods for some years past. The local records of rainfall registered about 15″ of rain on the 24th May. Four sections of the line were seriously affected and at one place the villagers cut the railway bank. The Naginimora and the Gauhati Branches also experienced heavy floods.

Certain sections of the Assam Bengal Railway experienced cyclones and storms but fortunately the damage done to railway property was nowhere of a serious nature.

On account of heavy rains during August and September breaches occurred on some sections of the Bombay, Baroda and Central India Railway. Due to a severe cyclonic storm and heavy rain on the 16th October, considerable damage was done to the permanent-way and other works for a distance of about 110 miles between Virar and Navasari. Numerous trees and signal and telegraph posts were uprooted, causing obstruction on the main line at various places. Communication at a restricted speed was restored on the next day and normal working was resumed six days later.

On the Bengal and North-Western Railway the section between Mansi and Koparia on the Mansi Division was closed for the period of the monsoon from 15th June to 1st November. There were several minor breaches and wash-outs on other sections of the Mansi Division but there were only short interruptions to traffic and the damage caused was not serious. On the other divisions of this railway no floods of a serious nature occurred.

On the Bengal Nagpur Railway due to heavy rains in June, certain parts of the East Coast Section were flooded. This resulted in the through running of trains being suspended for some time till the floods subsided and the line was put in running order.

On the same railway, train services between Bilaspur and Dadhapara and Ganjam and Chatrapur had to be suspended due to the lines being flooded during the latter half of the month of August.

As in the previous year, the broad gauge sections of the Eastern Bengal Railway experienced only minor floods and the extent of damage to railway property was slight. On the metre gauge sections, however, a sum of about Rs. 1,04,000 was spent on repairs to flood damages during the year. Protection works to several bridges had also to be carried out at an estimated cost of Rs. 3,52,000 approximately.

On the Great Indian Peninsula Railway as a result of torrential rainfall amounting to 6½ inches in four hours the track formation between Tapona and Lasina was washed away. The approximate cost of filling up the breach and restoring the track was Rs. 15,000.

Floods were responsible for several breaches on the Jodhpur Railway. Immediate steps were taken by the Railway in repairing these breaches and restoring through communication.

The Madras and Southern Mahratta Railway also experienced some floods and breaches during the year under review. Cyclonic conditions prevailed in the Guntakal District in May and affected some bridges.

On the North Western Railway exceptionally heavy rainfall took place over the area served by the Jullundur-Mukerian Section. Breaches were caused in several places and two piers of a bridge were washed away. Due to the serious nature of the damage it took several days before normal train service on the section could be restored

On the South Indian Railway, a heavy cyclone was experienced on the metre gauge coastal section on the 28th May, resulting in a serious accident. There were also some breaches on this railway due to heavy rains.

120. Anti-Malarial Measures.—The incidence of malaria was high on many Railways during the year under review. This led to increased anti-malarial activities on these Railways while others continued their normal precautionary and control activities The results obtained were somewhat impaired on account of the difficulty in obtaining some of the necessary drugs due to war conditions

APPENDIX A.

Resolution regarding the separation of Railway from General Finances, adopted by the Legislative Assembly on the 20th September 1924.

"This Assembly recommends to the Governor General in Council that in order to relieve the general budget from the violent fluctuations caused by the incorporation therein of the railway estimates and to enable railways to carry out a continuous railway policy based on the necessity of making a definite return to general revenues on the money expended by the State on Railways—

(1) The railway finances shall be separated from the general finances of the country and the general revenues shall receive a definite annual contribution from railways which shall be the first charge on the net receipts of railways.

(2) The contribution shall be based on the capital at charge and working results of commercial lines, and shall be a sum equal to one per cent. on the capital at charge of commercial lines (excluding capital contributed by companies and Indian States) at the end of the penultimate financial year *plus* one-fifth of any surplus profits remaining after payment of this fixed return, subject to the condition that, if in any year railway revenues are insufficient to provide the percentage of one per cent. on the capital at charge surplus profits in the next or subsequent years will not be deemed to have accrued for purposes of division until such deficiency has been made good.

The interest on the capital at charge of, and the loss in working, strategic lines shall be borne by general revenues and shall consequently be deducted from the contribution so calculated in order to arrive at the net amount payable from railway to general revenues each year.

(3) Any surplus remaining after this payment to general revenues shall be transferred to a railway reserve; provided that if the amount available for transfer to the railway reserve exceeds in any year three crores of rupees only two-thirds of the excess over three crores shall be transferred to the railway reserve and the remaining one-third shall accrue to general revenues.

(4) The railway reserve shall be used to secure the payment of the annual contribution to general revenues; to provide, if necessary, for arrears of depreciation and for writing down and writing off capital; and to strengthen the financial position of railways in order that the services rendered to the public may be improved and rates may be reduced.

(5) The railway administration shall be entitled, subject to such conditions as may be prescribed by the Government of India, to borrow temporarily from the capital or from the reserves for the purpose of meeting expenditure for which there is no provision or insufficient provision in the revenue budget subject to the obligation to make repayment of such borrowings out of the revenue budgets of subsequent years.

(6) A Standing Finance Committee for Railways shall be constituted consisting of one nominated official member of the Legislative Assembly who should be chairman and eleven members elected by the Legislative Assembly from their body. The members of the Standing Finance Committee for Railways shall be *ex-officio* members of the Central Advisory Council, which shall consist, in addition, of not more than one further nominated official member, six non-official members selected from a panel of eight elected by the Council of State from their body and six non-official members selected from a panel of eight elected by the Legislative Assembly from their body.

The Railway Department shall place the estimate of the railway expenditure before the Standing Finance Committee for Railways on some date prior to the date for the discussion of the demand for grants for railways and shall, as far as possible, instead of the expenditure programme revenue show the expenditure under a depreciation fund created as per the new rules for charge to capital and revenue.

(7) The railway budget shall be presented to the Legislative Assembly if possible in advance of the general budget and separate days shall be allotted for its discussion, and the Member in charge of Railways shall then make a general statement on railway accounts and working. The expenditure proposed in the railway budget, including expenditure from the depreciation fund and

the railway reserve, shall be placed before the Legislative Assembly in the form of demands for grants. The form the budget shall take after separation, the detail it shall give and the number of demands for grants into which the total vote shall be divided shall be considered by the Railway Board in consultation with the proposed Standing Finance Committee for Railways with a view to the introduction of improvements in time for the next budget, if possible.

(8) These arrangements shall be subjected to periodic revision but shall be provisionally tried for at least three years.

(9) In view of the fact that the Assembly adheres to the resolution passed in February 1923, in favour of State management of Indian Railways, these arrangements shall hold good only so long as the East Indian Railway and the Great Indian Peninsula Railway and existing State-managed Railways remain under State management. But if in spite of the Assembly's resolution above referred to Government should enter on any negotiations for the transfer of any of the above railways to Company management such negotiations shall not be concluded until facilities have been given for a discussion of the whole matter in the Assembly. If any contract for the transfer of any of the above railway to Company management is concluded against the advice of the Assembly, the Assembly will be at liberty to terminate the arrangements in this Resolution.

Apart from the above convention this Assembly further recommends—

(i) that the railway services should be rapidly Indianised, and further that Indians should be appointed as Members of the Railway Board as early as possible, and

(ii) that the purchases of stores for the State Railways should be undertaken through the organisation of the Stores Purchase Department of the Government of India."

APPENDIX B.

Officers of the Railway Department (Railway Board) and attached offices on 31st March 1941.

The Hon'ble Sir Andrew Clow, C.S.I., C.I.E., I.C.S., Member of Council of the Governor General.

Railway Board.

The Honourable Mr. L. Wilson	Chief Commissioner of Railways.
Mr. B. M. Staig, C.S.I., I.C.S.	Financial Commissioner of Railways.
Mr. J. H. F. Raper	Member.
Khan Bahadur Muzaffar Hussain	Member.
Mr. D. Colin Campbell	Controller of Railway Accounts.
Mr. T. S. Sankara Aiyar, C.I.E.	Director, Finance.
Mr. S. E. L. West, O.B.E., V.D.	Director, Traffic.
Mr. L. H. Swain	Director, Civil Engineering.
Col. H. W. Wagstaff, M.C., R.E.	Director, Establishment.
Mr. L. N. Flatt	Director, Mechanical Engineering.
Mr. J. D. Michael	Secretary.
Mr. R. V. Ramchandani	Deputy Controller of Railway Accounts.
Khan Bahadur K. Ubaidullah	Deputy Director, Finance.
Mr. A. K. Basu	Deputy Director, Traffic (Commercial).
Mr. V. Nilakantan	Deputy Director, Establishment.
Mr. N. C. Watney	Deputy Director, Mechanical Engineering.
Mr. H. M. Jagtiani	Deputy Director, Traffic (General) Tempy.
Mr. T. Kidd	Deputy Director, Mechanical (Stores) Tempy.
Mr. H. F. Simpson	Deputy Director, Traffic (Transportation) Tempy.
Mr. H. W. C. C. Smith	Assistant Secretary.
Mr. L. B. Ramchandani	Assistant Director, Finance, Tempy.
Mr. J. V. Stuart Edwards	Assistant Director, Engineering, Tempy.

Attached Offices.

(Central Standards Office.)

Mr. E. Ingoldby, A.M.I.C.E., M.I.L.E.	Chief Controller of Standardization.
Mr. H. Wood Robinson	Deputy Chief Controller (Civil).
Mr. T. G. Creighton	Deputy Chief Controller (Mechanical).
Mr. F. M. G. Wheeler	Assistant Chief Controller (Mechanical).
Mr. S. L. Kumar	Assistant Chief Controller (Civil).
Mr. P. R. Aggarwal	Assistant Chief Controller (Specifications and Record).
Mr. W. E. Gelson	Research Officer I.
Mr. W. Douglas Thomson	Research Officer II.
Mr. W. A. Nightingale	Research Officer III.
Mr. H. Rideau	Dynamometer Car Officer.

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